ADOLESCENT HEALTH: TIME FOR A CHANGE

Volume 8: Contractor Documents

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HEALTH AND RELATED SERVICES AVAILABLE TO BLACK ADOLESCENTS

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INTRODUCTION

The history of Black Americans in the United States is synonymous with disadvantage. The disadvantage manifests in disparities in deaths and illnesses that continue to this day. The Secretary's Task Force Report on Black and Minority Health (1985) identified six health problem areas that account for greater than 80 percent of excess deaths among all minorities: 1) Cancer, 2) Cardiovascular Diseases, 3) Chemical Dependency, 4) Diabetes, 5) Homicide, Suicide, and Unintentional Injuries, and 6) Infant Mortality and Low Birthweight. (Since the publication of this report we should probably add AIDS to this list). As of the 1980 census report Blacks represented the single largest minority group in the country, which leads us to infer that Blacks are disproportionately at risk in these health problem areas.

Although advances in medical science have led to improvements for all Americans, the gap between minorities and whites still exists. This persistence begs an examination of socio-cultural factors that may help us understand these problems, especially as they pertain to Blacks. While little is known about prevention and/or treatment of the health problems of Blacks, particularly among adolescents, this paper will undertake an examination of barriers to prevention and treatment in this special population (i.e., Black youths between 10 and 18 years of age). Further, we hope to provide information on alternatives to traditional treatment modalities.

A. Population Characteristics

1. Demographic Features. In 1983, there were 5.5 million Black adolescents (between the ages of 10 and 19) living in the United States (Gibbs, Huang & Associates, 1989). The median age of all Blacks was 26.9, compared to a national median of 32.7 (U.S. Bureau of the Census, 1981), indicating a higher percentage of children and youth than in the general population. In 1986, over 42 percent of this group lived in families earning less than the poverty

line ($10,000 for a family of three). This already shocking figure was substantially higher (67%) for the 47 percent of Black youths living in female-headed families. The median income for Black families was $17,604, as compared to $30,809 for White families. Among Black female-headed homes, however, the median income was $9,300, whereas intact Black families had a median income of $26,583. Thus, it appears that poverty among Blacks is highly related to single-parent status. Economic stability among Black families is more readily found in intact homes where there are two parents.

It should be noted that while there are many Black Americans who live in ghettos (approximately 30 percent are urban and poor) and this group has received the most research attention, there are over 70 percent who do not (U.S. Bureau of the Census, 1981). Of this latter group, a substantial proportion of poverty-level families live outside of metropolitan areas. Moreover, middle-income Black families ($15,000 - $32,000 income in 1981) constitute 32 percent of all Black families. Finally, eight percent of all Black families had annual incomes of more than $46,000 (in 1981). Clearly, the issues of health problems and service delivery differ markedly for these various income and geographical groups. Most research studies, however, do not provide sufficient data to differentiate them.

Because of the attendant problems associated with poverty and the high proportions of Black families who are poor, it is not surprising that Black youths as a group are under-served by our present systems of physical and mental health services. The ecological realities of this group, in fact, make them increasingly vulnerable to problems associated with the stress of poverty at the same time that important government services have been significantly decreased (Select Committee on Children, Youth & Families, 1989). A recent report by the Carnegie Corporation (1989) describes how today's young adolescents face alarming new risks in a variety of areas. Many of these risks are even higher for Black youths, particularly those who live in large, urban areas.

The highest percentage of Black youths are in school (about 60% graduate from high school), but substantial numbers of older adolescents can be found in other settings such as colleges, in work settings, not in school but unemployed, the military, and the juvenile justice system. Although there are health problems common to all of these groups, there are also particular problems unique to each, as well as differential access to various kinds of health services.

2. Subpopulation Differences. Surprising to many, the Black population is not as homogeneous as phenotypic characteristics might suggest. A number of subpopulations, each with a special history and unique cultural focus, adds to the ethnic diversity in the United States. The historical and sociocultural elements of these groups influence psychological adaptation and psychopathology. The cultural uniqueness of these subgroups in the context of the United States render them vulnerable to mental health problems due to their minority status. An examination of the ecological systems of these subpopulations will focus on differences and similarities with a view toward a better understanding of coping strategies, and implications for non-traditional approaches to mental health treatment modalities.

There is an increasingly large population of Blacks in the United States whose roots trace to English-speaking Caribbean peoples (West Indies). The West Indies consist of 17 island states or groupings, and two mainland territories. Typical countries in this Caribbean environment are:

the Bahamas
Jamaica
the American and British Virgin Islands
Dominica
Grenada
Barbados
Trinidad

The economics of the countries depend largely on individual farming, skilled and unskilled labor, and tourism. Additionally, there is oil in Trinidad and sugar and banana plantations elsewhere in the area. The rural peasants and urban poor (of African slave descent) are the victims of a color-class system resembling their status following emancipation. Ironically, Black middle-class individuals dominate politics and the government. As in the United States, poverty is a way of life for the lower classes. Roberts and Sinclair (1983) noted that the percentage of Caribbean populations with any secondary schooling ranged between seven and 22 percent, excluding Barbados where the figure rose to 72 percent.

Although there is an absence of overt discrimination against Blacks, as in the United States a Black skin and African features are viewed negatively -- light skin individuals are positively valued. Thus, poor Blacks are openly discriminated against by whites and light skin middle-class Blacks. These latter groups also avoid any semblance of identifying with the native dialect (Africa). These dynamics have contributed to poor self-esteem, and an inferiority complex among Black adolescents in Caribbean countries. The following profiles have been described by West Indian behavioral and social scientists:

1. There is a predominance of visiting or common-law relationships. These exist as a series of unions that are fragile and frequently terminated.

2. A high rate of recorded illegitimacy exists (e.g., more than 70 percent and 40 percent in Jamaica and Trinidad and Tobago, respectively). Despite a relative lack of stigma in the lower socioeconomic group, this status becomes embarrassing for most of the socially mobile and provides barriers to inheritance that compound the problems of poverty.

3. The mother is the dominant partner in unstable unions where fathers appear and disappear. Most mothers are unmarried and many are under the age of 21. The tendency to have several children by different men lessens the chance of a permanent union. The grandmother plays a crucial role in

> many homes where the mother has to work as sole supporter. Thus for the young male who is socialized in a strongly matrifocal unit, his male identification is severely threatened.
>
> 4. The begetting of offspring is considered intrinsic to male virility and to womanhood. When this is combined with unstable family patterns, and few educational or value protections against promiscuity, a crisis of overpopulation is engendered. These, together with overcrowding and poverty, have provided a situation of inadequate socialization. Overcrowded houses allow for little privacy whereby lower-class children can establish themselves as individuals (Allen, 1988, p. 311).

It is evident from these profiles that socialization and historical factors conspire here, as in the United States, to produce varying forms of sociopathy. The sociocultural disintegration in the West Indies and its consequences for poor mental health have relevance for how these groups are viewed when they migrate to the United States. However, we are not able to separate or untangle the effects of poverty and values.

West Indians who come to the United States are largely from the ranks of the highly skilled and professional categories, including students. These individuals are usually highly motivated to achieve wealth, status, and security. These aspirations have served to some extent to shield or encapsulate these Black migrants from the horrors of American racism (Justus, 1975). They nonetheless experience discrimination from American whites -- and Blacks! Frustrated ambitions are significant sources of stress, as well as homesickness, loneliness, and culture shock. These sociocultural phenomena and their adverse impact on mental health require special understanding so as to avoid mis-diagnosis and inappropriate treatment regimens.

The limited discussion above of Black subpopulations in the United States is only illustrative of the manner in which mass relocation, social disintegration, and economic control and oppression can be determinants in the health status of Blacks who come from outside the United States. The history and demography of these groups while different from native-born Blacks nonetheless result in similar conditions of family trauma and morbidity. Further research on migrant Black groups is needed before any definitive conclusions can be reached regarding their health status vis-a-vis other Blacks. The problem areas described above, however, suggest that on the surface the problems of Black migrants are no different from those of other Blacks.

3. Social Ecology. Two trends describe the Black population in the United States. It is growing in size relative to whites, and it is becoming increasingly more urban. According to U.S. census data the Black population has grown from approximately 10 percent in 1900 to 11.5 percent in 1986 (U.S. Bureau of the Census, 1981). And projections indicate that by the year 2000, the Black population will increase to 13.3 percent -- well over 35 million. At the turn of the century, greater than 90 percent of all Blacks lived on farms, most of which were in the South. By 1980 less than 60 percent of the Black population remained in the South. This movement largely from the rural South to the urban North produced mixed blessings in that greater economic opportunities existed in the North than in the South for Blacks, but the greater urbanization brought with it ghetto circumstances. Most of the Black population live in large cities, and in census tracts that are 50 to 80 percent Black. Thus, the environment in which most Black adolescents are reared is separated from the diversity that characterizes most of American society. An analysis of the above data suggests that the pathology of urban ghettos is a product of its physical isolation and economic distress. Although there is no uniformity of agreement among social scientists on this point, and many individuals adapt successfully to these environments, there is evidence of a relationship between the risk factors in urban ghettos and poor adaptation (Comer & Hill, 1985; Albee, 1986).

A number of epidemiological and research studies give evidence of higher incidences of behavioral disturbances in Black urban youths than in their white counterparts. Childhood psychopathology has its highest rates among Black children in poor, urban communities (Dohrenwend & Dohrenwend, 1981). A study in Manhattan reported that proportionately twice as many Black as white children showed psychiatric impairment (Langer, Gersten, & Eisenberg, 1974). Finally, a study of Black urban sixth-graders found that nearly 36 percent of children at one school was mildly depressed (Vincenzi, 1987). In late 1987, 35 percent of Blacks in whom AIDS was diagnosed had contracted it through intravenous drug use. By 1988 Black adolescents represented 50 percent of 1,212 persons under age 20 diagnosed as having AIDS; 14.6 percent were adolescents between 13 and 19 years of age. While there is no uniformity of opinion regarding these findings, and indeed a failure in some instances to produce confirming research data, there is a need for greater sensitivity to the social ecology of Black adolescents by practitioners who may be called upon to work within settings that serve this population.

We do have evidence that Black teenagers die from heart and congenital defects at twice the rate of white teenagers (President's Commission on Mental Health, 1987). Black teenage girls die from heart disease at three time the rate of white teenage girls. The tuberculosis rate in Blacks is five times that found in whites (Children's Defense Fund, 1986b). Yet, Blacks are twice as likely as whites to have no regular access to health care, and rely more heavily on hospital emergency rooms and other outpatient facilities (Children's Defense Fund, 1985b).

The ecological environments (urban ghettos) in which most Black adolescents and their families live are characterized by irregular employment, or what Wilson (1988) refers to as "structural unemployment," women who depend largely on welfare assistance to survive, and rampant crime and social disorder (Wilson, 1988). The situation for Black teenagers in the labor force has steadily worsened since 1974. The downward swing of the economy and an attendant rise in rates of unemployment has hit Black youth harder than any group in the workforce. Recent statistics on employment rates for teenagers show disparities between Blacks and whites indicating a worsening of the situation. As of July 1985, 14.3 percent of white teens were unemployed as opposed to 38.6 percent of Black teenagers unemployed. It has been well established that unemployment creates stressful situations for laid-off workers (CDF, 1985b), and their families as well. And stress has long been recognized as a major contributor to a variety of physical and mental health disorders (Dohrenwend & Dohrenwend, 1981). Other stressful factors such as racism and discrimination, unfulfilled rising expectations, life in the inner city, limited opportunities, and cultural conflict create a special risk for Black adolescents in the U.S., and these factors probably erode their capacity to resist illness (President's Commission on Mental Health, 1978).

The persistent and rising poverty, mounting social disruption, epidemic teen pregnancy, alcoholism, and divorce all pose risks to adolescents' mental health. Although these factors rarely occur in isolation, it is their interaction with each other and with other aspects of the social ecology that may produce maladjustment and place the person at risk for later and potentially more serious problems (i.e., psychological and behavioral disorders.)

B . Pathways To Adaptive Behavior

After Comer and Hill (1985) and Allen and Majidi-Ahi (1989) we believe that an examination of the context and the precursors of adaptive behavior for Blacks may be more informative than the cataloguing of maladaptive behaviors. For example, in 1985 the white-to-Black suicide ratio was almost two to one in the 15-24 years age group (U.S. Department of Health and Human Services, 1988). Minority group teenagers are less likely to die from motor vehicle injuries than whites but have higher rates of homicide. Black adolescents specifically have lower rates of alcohol and illicit drug use than whites (National Institute of Drug Abuse, 1987).

Ogbu (1985), using a cultural-ecological model, catalogues a host of adaptive behaviors in the interest of reinterpreting existing data on development of competence among inner-city Blacks. Citing a "black cultural imperative," Ogbu argues that clues about how Blacks in urban centers acquire instrumental competencies lies in an examination of inner-city social organizations and childrearing techniques. Although such an examination is beyond the scope of this paper, we conclude in agreement with Ogbu that inner-city Black Americans and white middle-class Americans do not share the same effective environment even within the same city:

> "The cultural imperatives of a given population (Cohen, 1971) -- the political, social and economic realities of the population -- dictate the cultural tasks (e.g., subsistence tasks or economic activities) cf its members and it is these activities that determine the adaptive or functional personal attributes prevalent in the population (p. 47)."

1. Social-Ecological Approach. Bronfenbrenner (1979) provides an ecological system that facilitates the examination of the social systems within which adaptation/maladaptation can be understood. The categories capture the range of person-environment interactions in adolescent development (Lewin, 1951), and will hopefully give evidence of the coping and successful adaptation of many Black youths. Blacks have lived with generations of discrimination and political oppression, and although labelled the "endangered species" (Gibbs, 1984, 1988) have managed to survive. Bronfenbrenner's social-ecological approach allows us to organize and understand the pernicious socio-political economic dynamics that generate stress into the lives of Black youths and their families.

Microsystems include immediate interactions with family members, peers, school teachers, etc. which have daily impact on the child. Interactions between and among elements of the microsystem that effect the child are referred to as mesosystems (e.g., interaction between family and school). Exosystems refer to settings (agencies) in the child's environment with which there is no direct contact but in which decisions occur that will directly affect the child or his/her microsystems, as in community health agencies and school boards. The fourth system in Bronfenbrenner's framework, and perhaps the most important, the macrosystem depicts values and mores pervasive in institutional settings. The prejudice and racism (macrosystem values) that permeate American institutions can have equally pernicious effects throughout the ecological environment of the child. Generations of discrimination, oppression, and deprivation contribute to the stress experienced by its victims and manifest in psychological and behavioral disorders. A review of the data across these ecological systems not only provides an appropriate context within which to understand the disorders affecting Black adolescents, but also the barriers and inhibitors to the search for traditional remedies -- and the alternative strategies that lead to adaptive outcomes.

The social ecology of Black children, many of whom live in ghettos, is characterized by a common culture derived from the macrosystem devaluation of Black people. Pervasive macrosystem values such as prejudice and racism have both direct and indirect effects on its victims. The complexity of this formulation is more clearly revealed when we contemplate these effects on other levels of the ecological environment: for example, at exosystem level the only mental health facility in the Black community may have too few therapists due to an unfair allocation of resources from the city; Black parents may fail in their attempts to address this problem with White city officials due to racial prejudice and insensitivity (mesosystem level); finally, at the microsystem level the Black adolescent seeking an alternative to the overcrowdedness at the mental health clinic may be frustrated in his/her difficulty to commute to another part of town where facilities are less crowded because of an inability to pay for transportation, or to have arrived successfully at another clinic only to be turned away because of a residential requirement. This sequence of events could be replicated across a variety of institutions and experiences in Black communities. More importantly, however, is our need to understand the pernicious effects associated with these experiences.

2. Survival Strategies. Blacks have developed a number of coping behaviors called survival strategies. Too often traditional systems attempt to view Black adolescents through "colorblind" eyes, without regard for their ethnicity, socio-economic status, and the social context in which they live. Yet Black adolescents live in environments where it becomes necessary to engage in coping behaviors due to problems experienced that are associated with their color. Ogbu (1985) describes these coping behaviors as subsistence strategies upon which Blacks judge competence. Presently there are no research studies documenting the kinds of instrumental competencies or skills required by the various survival strategies. Ogbu (1985) details a list and description of the attributes of adult categories employing the strategies as a means of providing some idea of these competencies: Conventional Worker (one holding a conventional job in mainstream economy); Clientship (also called Uncle Tomming -- in absence of employment or good wages individual attributes himself/herself to a white patron in return for services and/or deferential behavior); Collective Struggle (commonly associated with civil rights techniques, is used by Blacks to increase their pool of conventional resources in the inner-city); Hustling (strategy used in the street economy to obtain money, goods and services); Pimping (strategy used in interpersonal relationships for monetary gain, often an aspect of hustling activities); Entertainment (technique for exploiting social and economic resources within Black communities by satisfying people's needs for amusement and for therapy in coping with problems. Includes singers, musicians, preachers, comedians, etc who are capable of arousing "auditory and tactile sensibilities" (p. 56); The Street Man (survival strategy in which physical strength is used to achieve desired ends -- money, sex, services, and goods); Mutual Exchange (kin-based households and friendship networks in which members are expected to help each other with temporary shelter, food, clothing, childrearing, and other goods and services). Membership in the above categories is not mutually exclusive. A person may belong to different categories at different points in time and/or under different situations. For example, the hustler or pimp may from time-to-time hold

conventional employment or be involved in a mutual exchange relationship.

The importance of these categories or labels for our purposes is that they are illustrative of traditional and alternative styles of coping in the inner-city. The thrust of Ogbu's argument is that Black children and their families be seen in the context of the reality in which they live. Further, he argues that an examination of rearing and adjustment patterns would show that the great majority of inner-city Blacks acquire the knowledge, motivation, and skills to grow up to be confident adults who adapt to two cultures simultaneously -- the immediate environment and the wider world of the white middle-class. Assessments or analyses using criteria appropriate to a different milieu are likely to lead to diametrically opposite conclusions.

Ogbu's adaptive cultural model, while intriguing, is without empirical support. Bronfenbrenner (1985), for example not only disputes Ogbu's conceptualization, but challenges the ideas to the test of a longitudinal life-span analysis. Black childrearing is organized to inculcate the competencies which have proven effective in surviving inner-city life. Other competencies are gained in trial-and-error fashion. In agreement with Bronfenbrenner (1985), we agree that more research is needed for a better understanding of Black's similtaneous and successful adaptation to two cultures.

II. MAJOR RELEVANT HEALTH ISSUES

A. General Health Status

Adolescents as a group are typically healthier than other age groups. Nevertheless, they were the only age group who exhibited a higher mortality rate in 1979 than they did in 1960 (Lear, Foster & Wyline, 1985). Good health status is a function of many factors including health education, nutrition, and access to health care. Poverty status affects each of these adversely. Low-income youth are much less likely to have public or private health insurance and are 40-50 percent less likely to receive physician and hospital care as a consequence (Children's Defense Fund, 1986b).

Disparities in mortality rates between Blacks and whites begin at birth. The U.S. has a dismal rate of infant mortality compared to other industrialized countries, and within this context, Black infants are twice as likely to die as white infants. At the other end of the life cycle, the average life expectancy for Blacks is 69.6 years, as compared to 75.2 years of whites (Gibbs, et al., 1989). General health status differentials throughout life exhibit similar trends. Blacks, for example, have higher serum cholesterol levels and higher blood pressure levels than whites (U.S. Dept. of HHS, 1988). These same trends are apparent in adolescent age groups as well. Black adolescents compared to their white counterparts have a higher incidence of mortality, chronic impairments, disabilities, physical handicaps, obesity and elevated blood pressure (Brunswick & Collette, 1977; Brunswick, Merzel & Messeri, 1985).

While technological advances in the control of medical illnesses have decreased mortality rates in most age groups, there are many new environmental risk factors that are causing increased morbidity and mortality for adolescents. The three leading causes of death in adolescents are accidents, suicide, and homicide. One way of assessing these effects is by the years of potential life lost. Blacks of both sexes exhibit twice the number of potential years lost from these causes combined (MMWR, 1986), but racial differences are not consistent across the categories. Whites show higher rates of suicide and death from automobile accidents, whereas Black adolescents have higher rates of other kinds of accidents and are five times more likely to die from homicides as are white youth. Mortality rates are affected not only by race but by gender as well. Males are much more likely to die during adolescence from most of these causes, particularly suicide (where white males show the highest rate; Black males show the second highest) and homicide.

In addition to fatalities, a number of other societal conditions are related to increasingly significant physical and mental health problems in adolescents including substance use and abuse (cigarettes, alcohol, and illicit drugs); physical abuse; careless sexual practices leading to teenage pregnancy and sexually-transmitted diseases; and careless risk-taking behavior resulting in accidents and injuries. Moreover, many of these problems often impinge with greater severity on Black than on white adolescents. These will be discussed in more detail in subsequent sections of this report.

On a wide variety of fronts, therefore, Black adolescents appear to be at significantly greater risk for serious health and mental problems than most other groups. Concomitant with this greater vulnerability, however, they have had less access to needed services both in prevention and tertiary care.

1. Prenatal Care. Good health begins prior to birth. One of the most significant factors affecting the health of infants is the availability and quality of medical care during the mother's pregnancy. Women who do not receive such care are more likely to have birth complications, more premature births, more infants of lower birth weight, and increased infant mortality. Babies born to mothers receiving prenatal care are five times as likely to live and six times as likely not to be born prematurely as those not receiving care (Select Committee on Children, Youth & Families, 1988). Low birth weight infants are associated with a variety of risk factors from birth on including higher infant mortality, birth injury, poorer health, lower attention spans, and greater incidence of learning disorders (Institute of Medicine, 1984).

The issue of appropriate prenatal care is particularly germane to Black adolescents in two ways. First, they themselves may be exhibiting the sequelae of non-existent or poor quality care. Second, 40 percent of all Black females will be mothers before they reach the age of 20. While over 75 percent of pregnant women in the U.S. do receive prenatal care in their first trimester of pregnancy, the 25 percent who do not are disproportionately represented in poor, Black adolescents (Brown, 1988).

Despite the advent of Medicaid, substantial racial disparities continue to exist in the use of prenatal care. Black women were half as likely as white women to receive late or no care in 1985 (Brown, 1988). Within this group those most as risk are low income, unmarried, inner-city teenagers. In 1983 only 44 percent of pregnant Black teenagers who had not finished high school obtained early prenatal care (Ingram, Makuc & Kleinman, 1986). Insufficient care is also more pronounced in some geographic areas than in others. A woman in New York, for example, is three times as likely as one in Michigan or Connecticut to obtain late or no care. On both the local and national level, however, the use of prenatal care increased during the 1970's but leveled off since 1980 (Ingram, et al., 1986).

There are a variety of factors underlying these various trends regarding the accessibility of prenatal care to Black teenagers. One recent study (Johnson, Gibbs, Kogan, Kapp & Hansen, 1987) found four major barriers for this group: financial (no health insurance), fear of medical procedures, ambivalence about their pregnancy, and denial. Lack of money or insurance appears to be the first factor obtained in almost all studies of this age group (Brown, 1988). Despite the enactment of the Pregnancy Discrimination Act in 1978, which required employees to offer maternity care benefits, most Black pregnant teenagers are not employed and their parents are not likely to have such coverage. Furthermore, while the enactment of Medicaid in 1965 vastly increased the use of medical services for low income individuals (including prenatal care), two significant problems remain. The first and most significant is that a large portion of the poor is not enrolled in Medicaid programs, and this segment is increasing. In 1988 the average income eligibility ceiling for Medicaid was only 49 percent of the federal poverty level (Hill, 1988). A second set of problems is that even those who are Medicaid-enrolled: (a) do not obtain prenatal care as early in their pregnancy as those with private insurance (often because of cumbersome program enrollment requirements), (b) rely more on overburdened clinics that may provide less adequate care, and (c) are adversely affected by the shrinking pool of obstetricians willing to work for low Medicaid rates as their malpractice insurance premiums soar. These issues exemplify the exosystem level described by Bronfenbrenner.

A prestigious committee that recently studied the multiple facets of this problem concluded that the United States had "a maternity care system that is fundamentally flawed, fragmented, and overly complex. Unlike many European nations, the United States has no direct, straightforward system for making maternity services easily accessible. Although well-insured, affluent women can be reasonably certain of receiving appropriate health care during pregnancy and childbirth, many other women cannot share this expectation" (Brown, 1988, p. 136).

Unfortunately, poor Black teenagers have less access than most. In view of this glaring inequity and the proven cost-effectiveness of prenatal care across a wide variety of health problems, the authors of this report concur with the previously mentioned report's recommendation that a macrosystem change is needed and that "the nation adopt as a new social norm the principle that all pregnant women -- not only the affluent -- should be provided access to prenatal, labor and delivery, and postpartum services appropriate to their need" (Brown, 1988, p. 136-137).

2. Nutrition and Fitness. Over the past decade there has been increasing recognition that dietary practices and regular exercise play an important preventative role in a variety of illnesses. Expressed concern about nutrition and fitness has been most obvious in affluent, middle-class adults who are more prone than adolescents to recognize the links between, say, high cholesterol levels and illnesses likely to manifest themselves in middle age, such as cardiovascular problems, heart conditions, diabetes, etc.

Although adolescents are not particularly mindful of these problems, increasing evidence indicates that poor nutrition and inadequate exercise during this period may indeed be related to health problems later in life. Moreover, poor nutrition is associated with poorer health during adolescence as well. Low income Black children and adolescents are more likely than whites to suffer from poor nutrition and its attendant health problems. It has been estimated (Children's Defense Fund, 1985b) that 20 to 30 percent of all low income children suffer from health problems related to inadequate diets or chronic malnutrition. These problems, often indicated by low hemoglobin counts, include iron deficiency anemia, fatigue, decreased attentiveness, impaired weight gain, stunted physical growth, and brain cell damage (Carter, 1983; Gibbs, 1988). The negative effects of early malnutrition are not counteracted in adolescence. High levels of anemia are found in low income Black adolescents (Hayman & Probst, 1983) and may be associated with increased irritability, restlessness, and lowered attentiveness (Carter, 1983).

The incidence of hunger and malnutrition has increased over the past decade with particularly adverse effects on Black youth and their families (Select Committee on Hunger, 1985). Despite this, however, funds have been cut and eligibility restricted for food stamp and nutrition programs during the previous administration. In the 1980's the federal government spent more to store the surplus farm products of affluent farmers than it did to support food stamps and school lunch programs (Rodgers, 1986). Even when poverty is not the primary issue, adolescents are often at risk for later illnesses because of their poor dietary habits.

3. Other Health Issues. There are a variety of syndromes that are overrepresented in Black adolescents relative to other groups. One relatively rare, genetically-transmitted disease found primarily in Blacks is sickle-cell anemia. It affects one out of every 600 Blacks. Symptoms include fevers, respiratory infections, eye problems, arthritic pain, and progressive organ damage. This illness, currently incurable, can result in premature death. Some investigators believe that more research money would be expended if its primary victims were white.

Tuberculosis, a disease that many believe is practically extinct, has recently exhibited an alarming increase in low income Black families, particularly Black youth. Over one-third of recently recorded new cases are among Blacks (Centers for Disease Control, 1987c), and Black males are four times as likely to contract tuberculosis than their white counterparts. Tuberculosis is a disease generally associated with poverty, poor housing conditions, and poor health care (Gibbs, 1988). The increase may also be partially related to the increase in AIDS cases who become very vulnerable to this infection. It also seems to be on the increase in homeless families, where Blacks again are over represented.

A major chronic illness among adult Black males is hypertension. This trend has its roots in adolescence (and possibly earlier) since a high proportion of Black male teenagers also show elevated blood pressure levels (Carter, 1983). In fact, cardiovascular disease is the fifth leading cause of death for Black adolescent males. Very little research attention appears to be directed at this problem in terms of preventative efforts.

A host of other less major, but nevertheless debilitating, conditions are more common in Black youth. Many of these are related to poor housing and insufficient heat. They include chronic respiratory problems, infestation from vermin, insect and rat bites, and more accidents due to poorly constructed buildings. Overcrowded households and lack of parental supervision also make Black youth particularly vulnerable to physical and sexual abuse (Hampton, 1986). These various vulnerabilities are often attributable to both the exosystem and a macrosystem that devalues this group. Because of these vulnerabilities Black youth are frequently in need of medical care.

B. Mental Health and Psychosocial Issues

There are a number of problems in arriving at precise estimates of incidence of various types of mental disorders in Black adolescents. The major problem is that there have been no large epidemiological surveys of mental health problems in Blacks (Liu & Yu, 1985). Secondly, estimates that have been made are often associated with bias in the diagnosis of Black patients (Bell, Bland, Houston & Jones, 1983), which may lead to either underestimates (e.g., with depression) or overestimates (e.g., perhaps other psychoses) of particular syndromes.

A number of recent investigators have further suggested that existing theories concerning mental illness may not be readily generalizable from the white population upon which they are based. Compounding the problem is the fact that until recently, there have been few people of color in the fields traditionally associated with treating people with emotional problems, i.e., psychiatry and clinical psychology, and accordingly, little emphasis has been paid to subcultural differences in most training situations.

This omission is not limited to theories about mental illness but is equally evident in our general developmental theories concerning adolescence as well. To take but one example, Erikson's theory (1959) is widely cited as containing key concepts for understanding the psychological transitions of adolescence. Erikson postulates an eight-stage life span theory, where each stage contains a central crisis to be solved. According to Erikson, the modal issue for adolescents is identity, and the characteristic crisis to be "solved" is to establish a strong personal identity (in a variety of areas including interpersonal, vocational, philosophical, etc.) or to be diffuse in one's adult roles. There are various possible routes and pitfalls that adolescents encounter in this quest. The path of those who achieve identity typically begins with a period of identity diffusion in early adolescence, where no firm commitments are made, then continues to a period of identity moratorium, which is a period of active uncertainty in which different roles are tried out and final decisions deferred. Following this, the adolescent can proceed to (and presumably remain in) a phase of identity foreclosure, in which beliefs and life goals are chosen "prematurely" without weighing the many alternatives and options available. An alternative route is to work through the various alternatives, to experience the associated anxiety, and to emerge with the more stable commitments associated with the identity achievement phase. Research conducted within this framework (e.g., Marcia, 1980) suggests that many adolescents fail to reach the more mature identity achievement stage.

Almost all of the research dealing with adolescent identity development has been conducted with white, middle class samples. Undoubtedly, concern about identity cuts across all groups of adolescents. The theory, however, begins with the assumption that the developing youth has unlimited options, an assumption that may not be tenable for less affluent groups who have neither the time, the financial and psychological support, nor the leisure to try out many roles. Under such circumstances, identity foreclosure may be an even more common outcome and may be associated with more adverse mental health consequences.

There are several aspects of Eriksonian theory that may be applicable to understanding some of the mental health problems associated with Black adolescents, but these have not been actively researched. First, identity crises do not emerge full-blown at adolescence. Rather each stage is somewhat dependent upon what transpired in prior stages. According to Erikson the crisis of the prior, grade school period is industry vs. inferiority. During this developmental stage that children establish fundamental attitudes towards work. If they learn to master certain basic skills and are reinforced for doing so, they emerge with a positive sense of efficacy. If, on the other hand, they do not master societally-valued skills and are negatively reinforced for the skills they do acquire, they are likely to develop feelings of lack of worth and negative self-esteem. Inadequate urban schools, then, may not only be failing these children in basic education, they may also be contributing to their feelings of inadequacy. This may, in turn, lead to the identity pathway that Erikson (1959; 1963) calls negative identity.[1] This can occur when individuals are devalued and rejected by the dominant culture. Under such circumstances they may evolve a personal identity that is based upon characteristics that oppose the dominant culture, i.e., becoming the rebel, the "meanest" or the most deviant.

Although this reasoning clearly has applicability to less affluent adolescents, it has not generated much research. Rather most studies have been conducted with White college populations, thereby eliminating large numbers of youth from the theory's purview. As

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[1] The term "negative identity" certainly has racist overtones, and its applicability to Black youth has been challenged (Chestang, 1984). A similar concept, however, has been proposed by Steele & Nisbett (1989), namely that of "protective identification." He argues that vulnerability to stigmatization causes individuals to "dis-identity" with the mainstream orientation associated with the vulnerability and to turn to alternative types of identities. The predictions of both theories are similar.

Ogbu (1985) has noted, studies of child development have not typically taken into account Black cultural imperatives or erroneously assume that these imperatives are the same for Blacks and whites. White middle-class behavior patterns are often taken as normative. Thus, our most widely accepted conceptualizations about adolescent development have tended to ignore subcultural differences about the very meaning of adolescence. What does preparation for an adult role mean to a teenager who has been alienated from and victimized by the very society that now expects conformity? With these varying issues in mind, we now turn to the estimates of traditional mental illness categories that have been made.

1. Psychosis. With regard to those conditions that involve hospitalization, Black youth have considerably higher (about 2 to 3 times) rates than whites (Myers & King, 1983; Liu & Yu, 1985). As previously noted, investigators (e.g., Gibbs, 1988; Bell, et al., 1983) have questioned whether this finding reflects true sample differences or diagnostic bias. On studies using screening scales, race differences appear to be minimal when socio-economic status is controlled for (Liu & Yu, 1985). Blacks are often assigned more serious diagnoses than are whites even though presenting symptoms are similar. This trend may well be reflective of institutional racism.

Two additional problems in assessing accurate rates of psychiatric disorder are that: (a) available statistics are based only on those who seek treatment and many do not, and (b) those who do seek help may be less likely to search out psychiatric treatment and instead employ ministers, relatives, or the hospital emergency room. In spite of these provisos, it is clear that the level of stress experienced by inner-city Black youth is often overwhelming and those who are not able to tolerate the continual micro-assaults (Pierce, 1970) of racism often develop a variety of mental disorders.

Gibbs (1988) is one of many investigators who has eloquently described the kinds of stress Black youth are continuously and cumulatively exposed to: "a teacher calls him stupid; a white stranger gets up and walks away when he sits next to him on a crowded bus or subway; a bank teller reacts suspiciously when he tries to cash a check; an employer refuses to interview him for a job; a clerk ignores him in a department store; a cab driver ignores him or refuses to take him to a "black" neighborhood; a police officer stops to question him in a white neighborhood ... these daily interactions take an enormous toll on the mental health of black youth in America, driving many of them to the depths of despair and the brink of madness" (Gibbs, 1988, p. 242).

The incidence of schizophrenia in the general population (all age groups combined) is estimated at one percent (Kimmel & Weiner, 1985). For Black males the rate is about twice as high (Bell, et al., 1983). Most forms of schizophrenia begin during late adolescence and early adulthood so that the incidence rate for adolescents is not essentially different than that for the general population. Schizophrenia is diagnosed in 25 to 30 percent of all adolescents admitted to public mental hospitals. Black adolescent males in these institutions are six times as likely as white males to be diagnosed as schizophrenic (Milazzo-Sayre, Benson, Rosenstein & Manderscheid, 1986).

The incidence of serious effective disorders (e.g., psychotic levels of depression or manic-depressive syndromes) is about four percent in adults, but this disorder tends to be less frequent in youth when hospitalization admissions are studied. Earlier studies have suggested a lower prevalence of affective illness in Blacks, than in the general population, but more recent studies have shown very high rates of depression in low-income Black adolescents. Some have suggested the rates of serious depression may be between five and 15 percent (e.g., Kaplan, Landa, Weinhold & Shenker, 1984). Suicide rates for Black male adolescents have nearly tripled between 1960 and 1985 (Gibbs, et al., 1989), and have doubled for Black female teenagers in this time. Investigators have suggested that depression is underestimated in this population because "depressive equivalents" may include high-risk behaviors and acting out. Even more typical depressive symptoms such as fatigue, loss of appetite, and difficulty in carrying out everyday activities may be interpreted by adolescents and their families as physical ailments rather than mental health problems (Costa & McCrae, 1980). Because of these reasons the incidence of depression in Black adolescents appears to be underestimated. The ecological reality for most Black adolescents would seem to generate considerable depressive symptomatology, although it may not always be recognized as such.

Black youth who are diagnosed as psychotic are more likely to be placed in state and county inpatient facilities but have lower rates of admission to private inpatient services. This trend has led some to suggest that there exists a dual system of care as far as race is concerned (Thompson, Rosenstein, Milazzo-Sayre & Mac Askill, 1986). Within the psychiatric facility itself, Black youth are also more likely to receive different kinds of treatment (Sue, 1977; Jones & Korchin, 1982). Mental health workers often mistakenly believe that Black patients are unable to profit from psychotherapy (i.e., because of insufficient verbal skills, motivation, etc.), thus, they are more likely to receive supportive treatment and medication, which may be less effective. Some recent evidence (Kutner & Brogan, 1990) suggests that this trend is true for physical ailments as well. Black patients, for example, are much less likely than whites to receive kidney transplants (the more desirable treatment) and more likely to receive dialysis (the less effective treatment). Once again, the exosystem and macrosystem effects appear to interact to produce harmful outcomes.

2. Conduct Disorders and Juvenile Delinquency. Aggressive, anti-social behavior patterns are not uncommon in adolescents and appear to be on the increase. Such behavior is likely to first lead to difficulty in the school setting and later to delinquency. With regard to school settings, Black teens have a disproportionately high rate of conduct problems. They are suspended or expelled more often than whites for truancy and aggressive behavior towards peers and teachers (Children's Defense Fund, 1985).

Aggressive, acting-out behavior outside of school settings is likely to lead to trouble with law enforcement agencies. While very few adolescents are arrested in absolute numbers (6.27 arrests per 100,000, U.S. Dept. of Justice, 1988), this age group accounts for proportionately more arrests for serious crimes than their numbers would suggest. The juvenile justice system, as currently constituted, does little to modify acting out behaviors. Quite the contrary -- boys convicted at an early age appear to become the most persistent offenders as adults (Wolfgang, 1965). Self-reported offenders who are convicted between the ages of 14 and 18 are more likely to commit crimes than those who are unconvicted (Farrington, 1977).

Male adolescents are more likely to commit serious crimes. They are arrested eight times as frequently for violent crimes and four times as often for property crimes as are female teenagers.

Black adolescents are over-represented in arrest statistics relative to their numbers, accounting for 54 percent of arrests of violent crimes by juveniles, 68 percent of arrests for aggravated assault, and 45 percent of arrests for robbery (U.S. Dept. of Justice, 1988). They are also twice as likely to be arrested for property crimes as whites. A variety of interpretations have been given to these statistics.

Crime rates are strongly associated with low socio-economic levels and urban location, and both of these factors impinge more profoundly upon Black youth. Statistics comparing racial groups do not typically control for such demographic factors. A second factor is that Blacks are more likely to be arrested than whites engaged in the same behavior, due to racism (e.g., Huizinga & Elliot, 1986). When self-reports of offenses are looked at (Elliot, Ageton, Huizinga, Knowles & Carter, 1983; Krisberg, Schwartz, Fishman, Eiskovits & Guttman, 1986), racial disparities are much smaller than those typically reported in arrest statistics. Yet another difference is that anti-social behavior in white adolescents is more likely to be interpreted as an index of emotional disturbance and treated as such, whereas Black adolescents are more typically institutionalized and not treated by mental health professionals (Lewis, Balla, & Shanok, 1979, cited in Bell, et al.; Dembo, 1988).

Black adolescents are also at greater risk of being victims of violent crimes. Homicide is currently the leading cause of death for Black male adolescents (Centers for Disease Control, 1985), and the rate is nearly six times as great as for white males. These disparities, however, diminish considerably when socio-economic levels are held constant (Dembo, 1988). Most homicides are perpetrated by peers and involve the use of guns. Nevertheless, Black adolescents are also more likely to be killed in confrontations with the police than are whites (Pierce, 1986). Current estimates are that a young Black male has a five percent chance of being killed during his lifetime (Department of Health and Human Services, 1986), a truly chilling estimate.

Numerous theories have been proposed to explain this seeming explosion of crimes of violence (cf. Dembo, 1988), but very few are associated with strong corroborative research. Variables mentioned have included economic factors, family socialization, racism-caused rage, importance of gang affiliation, and the role played by criminal models in inner-city areas. It is not the purpose of this paper to go into the complexities of these various theoretical positions. We would, however, like to discuss two factors that have not been as prominently mentioned by criminologists that appear to deserve further investigation. The first is the role that television plays in teaching violent behavior. The second is the role of father absence.

While developmental psychologists have devoted considerable attention to the issues of how television violence affects children's behavior, the public has not taken the issue very seriously, in part because of both habituation and industry obfuscation. A recent report by a Task Force of the American Psychological Association (Huston, Watkins & Kunkel, 1989) notes that by early adolescence, "The young viewer will have witnessed approximately 8,000 murders and more than 22,000 assorted acts of violence - more than 30,000 violent acts before they hit the schools and streets of our nation as teenagers" (p. 74). There have been consistent correlations obtained between amount of television violence viewed and degree of aggressive behavior displayed (Freedman, 1984) both in natural and experimental settings. In one interesting study, verbal and physical aggressiveness in children was measured before and after television was introduced to the community (Joy, Kimball & Zabrack, 1986). The investigators found an increase in general levels of children's aggressive behavior after the introduction of television.

These findings may be particularly relevant for Black adolescents for several reasons. The peak of television watching occurs in early adolescence (Huston, Wright, Rice, Kerkman & St. Peters, 1987), a period that coincides with initial delinquent forays. Low income individuals watch television more (Greenberg, 1986). Blacks watch more than whites, even when socio-economic status is controlled (Roberts & Bachen, 1981; Graves, 1989), and rely more upon it for news and information (Staples & Jones, 1985). Additionally, research shows that adolescents as a group are under-represented and devalued on television (Signorella, 1987), thereby providing few positive role models. Thus, the pernicious effects of television violence may be particularly pronounced on young, poor Black adolescents.

The issue of family composition is frequently mentioned in connection with Blacks because of the increasingly high incidence of single-parent, mother-headed families in this group. In 1960 this type of family constituted nine percent of all Black families. In 1980 this figure was 40 percent, and the most recent census figures released show a further increase to 44 percent (Green, 1989). While the most deleterious effect associated with female-headed families is poverty, there may well be other negative effects on not having a resident father present, particularly on boys.

One of the hallmarks of adolescence concerns the differentiation of adult-oriented gender-role behavior within the context of physiological sexual maturity. While children learn gender-role stereotypes at very early ages, they continue to learn particular gender-role behavior appropriate to each developmental level (Katz, 1986). According to some theorists (e.g., Hall, Lamb & Perlmutter, 1982), early adolescence represents a time when behavioral gender stereotypes may become particularly pronounced and consequently adolescents' behavior may appear to be caricatures of masculinity and feminity. This view is also in accord with psychoanalytically-oriented writers (e.g., Freud, 1969) who stress the increase in sexual and aggressive energy concomitant with biological maturity. In the absence of a consistently available, loving male model, adolescent boys may need to turn to others (including television characters) to learn how to behave in their more masculine style. Related to this is the anthropological theory of Burton and Whiting (1961) which suggests that in less industrialized societies, adolescent initiation rites are particularly stringent for boys who have lived their entire childhood in households with only adult women. These investigators have argued that severe initiation rites to prove manhood stem from a need to counteract this earlier feminine identification and closeness. It is not clear whether such a mechanism may be at work in Black adolescents, but this reasoning does suggest the need to parse out the effects of poverty from those of father absence. Earlier psychological research (e.g., Sutton-Smith & Rosenberg, 1968) has suggested that males from single mother families do more poorly on college entrance exams, even when income level is controlled for.

In summary, what we are suggesting here is that all adolescents have a need to define and enact gender-appropriate behavior, often in caricatured form. Boys who do not have access to consistently present, affectionate male adult models, however, may be particularly vulnerable to television stereotypes regarding the relation between masculinity and violence.

Delinquent behavior typically starts in the early teen years. It is uncommon for crime to start in adulthood. The "typical" high-rate offender has the following characteristics (Farrington, Ohlin & Wilson, 1986): young male who begins crime in early adolescence; troubled, low income family; parents likely to have criminal records; history of acting out behavior in school; does poorly academically and often drops out; has difficulty finding a job; often becomes a frequent drug user; and commits crimes in the company of other young men.

It is apparent from this description that the same set of factors associated with delinquency underlie a wide variety of other adolescent problems as well. The above list suggests a number of points for preventative intervention. Societal concern with crime, however, has not led our elected officials to deal with theses correlates. Rather they have stressed the apprehension aspects, which as noted above, may paradoxically have the opposite effect than that intended. Programs that attempt to frighten juveniles into stopping criminal activities by showing them the horrors of imprisonment seem to backfire (e.g., Lewis, 1983; Finckenauer, 1982; Lundman, 1984). These programs don't deter juveniles but rather make them worse (Farrington, et al., 1986). Similarly, research results go contrary to folk wisdom with regard to increasing the number of police. While fear of crime decreases as more patrolling officers are added to neighborhoods, crime rates do not seem to go down (Kelling, Pate, Dieckman & Brown, 1976; Wilson & Kelling, 1982). Of the many different kinds of programs proposed for preventing delinquency, the most successful seem to be those that impart school-compatible skills to children (Dembo, 1988). Long-range solutions are more effective than short-term ones.

While many theories have been proposed regarding the causes of delinquency, none of them have adequately addressed the most central issue -- individual differences. Why is it that some adolescents become delinquent, whereas others with the same ostensible circumstances do not? Consideration of this question should remind us that despite extremely high societal attention focused upon delinquent youth, most youth are not delinquent. Studies suggest that a majority of crimes are committed by a relatively small proportion of chronic offenders (Wolfgang, Figlio & Sellin, 1972; Wolfgang and Tracy, 1982; Shannon, 1981; Farrington, 1983b). What this suggests is that some of the voluminous research attention currently being devoted to why adolescents become delinquent should be redirected to ask why so many do not become delinquent. As Kallman & Jarvik (1959) once noted in a different context, " ...there is no simple relationship between a good home and normal behavior any more than between a poor home and mental disorder" (p. 355). Given the vast amount of social pathology, racism, and economic privation Black adolescents are often exposed to, how can we better understand the strengths and resiliencies of the many Black families whose teenagers do not get into trouble with the law, despite extraordinary adversity. We will say more about this later.

3. Substance Abuse. Much has been and continues to be written about substance abuse in both the scientific and the popular press. It represents a major health risk for adolescents. As Moyer (1987) notes, "American students may not measure up to their Japanese or European peers academically, but U.S. teenagers rank number one in terms of drug abuse" (p. 1). The problem was recently described by former Secretary of Health, Education and Welfare, Joseph Califano, as Public Health Enemy Number One, requiring 300 billion dollars to solve rather than the 500 million currently allotted for research and treatment (Califano, 1989). The statistics Culifano cites are staggering: (1) Half of the nation's hospital patients and most homeless people suffer from alcohol or drug abuse; (2) The largest single cause of mental retardation is alcohol, (3) One out of every ten fetuses are exposed to illegal drugs, (4) Three-fourths of all homicides are drug or alcohol-related, as are more than half of the cases of rape, child abuse, and assault. Treatment is mostly unavailable (only 10% of those who need it, get it) and unsuccessful (12% of those who enter drug programs are drug-free after a year).

In terms of numbers the most damaging substance is alcohol, despite its legality. Alcohol abuse is the most pervasive, and it is estimated that there are 3.3 million alcoholics under the age of 18 (Towers, 1987). Moreover, alcoholism is on the increase for this age group (8.2% since 1980). It has been described as the number one youth drug problem (Forney, Forney, Davies, Van Hoose, Cafferty & Allen, 1984). It is also the most deadly since automobile accidents are the single largest cause of adolescent mortality, and almost half of these are alcohol-related. Black youth have somewhat lower rates of alcohol use than whites (Dembo, 1988), at least in early adolescence, but they are still substantial.

Another legal substance that is hazardous to health is nicotine. Despite the widely known adverse consequences of smoking, there are still 55 million smokers in the U.S., and adolescence is the period when smoking habits typically start. An earlier longitudinal study of inner-city Black youth in Harlem (Brunswick, 1979) found that 57 percent were smokers, a higher percentage than is reported for all high school seniors in 1988 (29 percent, NIDA, 1987). A survey based on a probability sample of households in 1988 found no differences. Nevertheless, it is particularly disturbing to see the recent increases in cigarette advertising directed at minority communities.

Marijuana is the most widely used of the illicit drugs. Incidence of use among teenagers has been estimated at 27 percent in the National Survey on Drug Abuse (Miller, 1983). It should be noted that almost 60 percent of American teenagers try at lease one illicit drug before they graduate from high school (Johnston, O'Malley & Bachman, 1987). White and Black adolescents have equal rates of marijuana use (Dembo, 1988). It is difficult to determine accurately rates of drug use in Black adolescents because most surveys have dealt with high school seniors who live with their families. Thus, because school dropouts and those living outside of their families are excluded from the analyses, the actual rates are probably higher for Black populations. Moreover, racial data typically aggregate Blacks from Southern rural areas who exhibit low drug usage with those residing in inner-cities, who have high drug use rates (Brunswick, 1988). These differences deserve more attention than they have received and demonstrate the significance of the social environment, above and beyond race and economic level. Heroin use appears to be on the decline, although it remains considerably more prevalent in Black communities. Cocaine use, including crack, is also higher among Black adolescents (Brunswick, 1979), but tranquilizers and stimulant pills are more frequently used by whites.

The health risks associated with high adolescent rates of drug use are considerable. Those Black adolescents who become addicted to heroin, for example, begin this usage at about 15 years of age. They then have a four times greater likelihood of dying before their mid-twenties than those who do not use heroin (Brunswick, 1988). They are also more likely to be school dropouts, to have been incarcerated by their 20's (30 percent vs. 3 percent in the low drug-involved group), and have more skin problems, more accidents, a greater incidence of gonorrhea (45% vs. 3%), and a much greater likelihood of getting AIDS from intravenous drug use. The recent rise in the use of crack is equally problematical because of its extremely addictive properties and the monetary inducements for selling it, even among young children. As Gibbs (1989) notes, drug use in general is particularly problematic for many low income Black youth because it is so often linked to a lifestyle that included delinquency and selling drugs. Because of the competition associated with crack sales, violence is also increasing in ghetto communities. In large urban centers, such as Los Angeles, teenage gang activity related to drug sales has greatly increased, and this is generally attributed to both crack use and the ease with which guns are procured. In an environment where over 40 percent of Black youth are unemployed and where the legitimate employment options available consist of minimum wage positions with no future, it is not surprising that many turn to selling drugs.

Like many of the other issues addressed in this paper, society currently seems singularly unable to deal successfully with the increasing frequency of teenage drug abuse. Concomitant with the problem increase, there has been a 40 percent decrease in services from 1980 to 1986 (Select Committee on Children Youth and Families, 1989). Thus, there are waiting lists for treatment from six to eighteen months, and the mental health block grants which fund some of these drug treatment services have been cut 32 percent since 1981.

Research has documented many linkages. From the individuals point of view, the earlier the onset of drug use the longer and more heavily that substance will be used, but substances used are not independent. In the Brunswick study, for example, all heroin users also smoked marijuana, and 80 percent of them also used cocaine. From the societal viewpoint, there are also linkages between drug usage and behavioral problems. Substance abuse is associated with delinquency, school failure, and absence of decent employment opportunities, suggesting that this is just one more manifestation of social neglect. Analogous to our earlier discussion about delinquency, it is important to recall that Black adolescents exhibiting problem drug use represent a minority. Once again, research directed at understanding how so many adolescents manage to avoid the easy availability and economic lures of drug involvement could inform us about the strengths still available in disintegrating neighborhoods.

4. Teenage Pregnancy. A very high proportion of Black teens become pregnant. By the time Black females are 20 years old, 41 percent are mothers (Moore, 1985). Of these births, 87 percent are out-of-wedlock births (Ladner, 1987). Sixty percent of teenage mothers rely on Aid to Families with Dependent Children for economic support.

The problems associated with teen pregnancy have been as widely discussed. From the teens' point of view, more medical problems associated with early pregnancy, such as toxemia and premature or prolonged labor (Moore & Burt, 1982). The psychological sequelae are even more far-reaching, often including dropping out of school, failing to develop the necessary vocational skills that go beyond poverty levels of income. From the infants' point of view, there are many potential problems as well. Because teenage mothers are less likely to seek out prenatal care, their infants are more likely to be born prematurely and/or be of low birth weight. Thus, their babies are more likely to have medical problems both at birth and later in childhood. They are also more likely to live in poverty.

Adolescent pregnancy rates are considerably higher than other developed countries despite similar rates of adolescent sexual activity. Among the top ten industrialized countries, the U.S. has the highest fertility rate for 15-19 year olds. What this suggests, of course, is that contraceptives are used more frequently in other countries than among American youth. Rates of out-of-wedlock births for Black women aged 15 to 19 have almost doubled between 1950 and 1980 (from 47% to 88%). The rate of increase is actually higher for white women of the same age (from 9% to 37%) but the absolute numbers are lower (O'Connell & Rogers, 1984).

There are many interpretations of these statistics, none of them entirely satisfactory. Early pregnancy is associated with urban poverty (Moore, Simms & Betsey, 1986). It has been argued by some that AFDC money may encourage early pregnancy, but the data do not show this to be the case. It has also been suggested that female adolescents are particularly susceptible to peer influence and are, thus, more likely to "go along" with sexual activity. There are widely held erroneous beliefs among teenagers that pregnancy cannot occur if intercourse occurs infrequently or at young ages. Some other explanations given include the need to have somebody to love (Ladner, 1987), to prove their womanhood, or to identify with other women in their families who have gone through the same experience. Yet another possibility, not frequently discussed, is that having a baby may be one of the few positive events achievable for some of these teens and that despite the negative financial aspects, birth and child-rearing may be gratifying. While this possibility needs to be explored in more research depth, statistics indicate that 80 percent of all teenage births are unintended and unwanted (Gibbs, 1989).

It is interesting to note that most theories of teenage pregnancy focus on the female, either forgetting that it takes two people to procreate or assuming that the responsibility for "saying no" or for using birth control should be hers. This focus omits several salient facts. First, many teenagers become pregnant as a result of rape or incest. Second, it is easier for males to obtain condoms than it is for females to obtain effective birth control technology (e.g., pills, diaphragms) without medical services. Despite this, however, lower income males often view contraceptive use as "unmanly" (Gibbs, 1988). Only 43 percent of metropolitan males aged 17-21 in a national survey said they used some method of contraception, and only 17 percent used a condom during their first sexual experience (Pleck, Sonerstein & Swain, 1988). As the males got older, their female partners tended to use the pill more, but withdrawal remained a frequently employed, albeit ineffective technique. Older males were less likely to use condoms, perhaps because females took more responsibility for contraception. Black males in this survey were somewhat more likely not to use any contraceptive method at either their first intercourse (66% vs. 55%, for Black and non-Black groups, respectively) or their most recent (41% vs. 36%). Although many of these 624 unmarried, sexually-active males had taken sex education courses, this was not predictive of condom use at either their first intercourse, which took place four years prior to the interview, or their most recent sexual experience.

Pleck, Sonerstein & Swain (1988) note how little research attention has been devoted to adolescent male contraceptive behavior and beliefs. It is also of interest to note how frequently television presents sexual activity. No reference is ever made to contraception, and pregnancy rarely results. Unfortunately, pregnancy rates are higher in the real world than on television, but the message being transmitted is that contraception is probably unnecessary or irrelevant. Our various institutions are clearly doing youth a disservice by not providing more realistic information. In their perhaps misguided zeal not to offend adults who do not believe in birth control techniques, schools and the media have forgotten that more than 80 percent of the public are in favor of sex education programs that teach adolescents about contraception. It is difficult to understand why youth should be repeatedly shown messages about how much fun it is to drink beer and commit violence, while the depiction of sexually responsible behavior should be off-limits. As noted in the APA report previously cited, the young adolescent will have witnessed 8,000 murders on television by the age of 13 (Huston, et al., 1989) but not one instance of contraceptive use.

5. Sexually-Transmitted Diseases and AIDS. Educational failure to teach youth about contraception, combined with negative attitudes about its use, have dire health consequences for teenagers that go beyond the issue of pregnancy. The rate of sexually-transmitted diseases has been increasing among adolescents. As noted earlier, high percentages of heroin users have gonorrhea (Brunswick, 1988). Of all new cases of syphilis occurring, 80 percent are among Blacks (Centers for Disease Control, 1987b). Young Black males have somewhat higher rates of other sexually-transmitted diseases than the general population (Hayman & Probst, 1983) because of earlier initiation of sexual activity and negative attitudes about condom use (Gibbs, 1988). The increase in syphilis was also associated with higher rates of infection from the HIV virus which causes AIDS. Intravenous drug users are also at high risk for

acquired immunodeficiency syndrome (AIDS), now becoming a leading cause of death for young adults.

In 1988 there were 289 cases of AIDS among 13-19 year olds (Centers for Disease Control, 1988), but over 14,000 cases reported for the 20-29 age group. The individuals who developed the symptoms in their twenties probably became infected as teenagers (Hein, 1988) because of the long incubation period for this fatal, incurable disease. One study which screened blood from 200 seemingly healthy adolescents found that 4.5 percent showed the presence of HIV antibodies (Hafner, 1987).

According to Gibbs (1988), AIDS occurs 2.6 times more often among Black men than among whites. Among this group homosexual and bisexual men represented 46 percent of the cases, and heterosexual intravenous drug users constituted 35 percent. Because of less access to medical services, Black AIDS patients have a much lower average survival rate of eight months, compared to 18 to 24 months for whites (Houstin-Hamilton, 1986). It has been estimated that 200,000 people will be infected with the AIDS virus by 1991 and that a large proportion of these will be young, Black males (Mays & Cochran, 1987). Some of these will be incarcerated Blacks. In prisons, 40 percent of AIDS patients are Black. Intravenous drug users are at high risk, as are a growing group of Black infants whose parents are both drug users. Black youth constituted 50 percent of identified AIDS cases under the age of 20 (Gibbs, 1989). Services available for counseling these youth, their families, and their sexual partners are extremely inadequate (Honey, 1988). Moreover, the groups that seem at higher risk appear also to be the most difficult to reach.

6. Educational Problems. Documenting the problems our educational systems have had in meeting the legitimate needs of minority populations would require a paper of its own. For the present purpose, however, it is important to note how frequently other psychosocial difficulties of Black youth are associated with school failure. While most of the reserve is correlational, and it is often difficult to discern causality, academic problems appear to

occur more often for those youth who become delinquent, drug abusers, and/or pregnant.

Much has been written about the lower scores obtained by Black youth on national achievement tests and the myriad problems associated with inner-city schools, and these are indeed causes for concern. Various theories have been propagated that focus upon such factors as youth attitudes, bureaucratic rigidity, or lack of fit between school expectations and Black cultural values. In this latter vein Boykin (1980), for example, has argued that Black children and youth are less impersonal and more responsive and expressive than whites and are, thus, turned off by an educational system that appears to them to be artificial and arbitrary.

Since non-white students constitute more than 70 percent of the public school populations in fifteen of our largest cities in all regions of the country (e.g., 70.2% in Boston, 74% in Dallas, 92% in Atlanta, 78.2% in Los Angeles, National Center for Education Statistics, 1985), the expectation for cultural sensitivity is certainly a reasonable one. Nevertheless, while continued attention needs to be paid to why youth fail, it may also be necessary to recognize achievements that have been accomplished. Fifteen percent of Black youth are below the national average in reading proficiency (Reed, 1988), but the other 85 percent are at or above it. More Blacks receive low grades than whites, but high percentages of Blacks who graduate from high school receive A's as well (e.g., 12% in English, 18% in foreign languages, 13% in business, 32% in art). The percent of Black students completing high school rose from 12.9 percent in 1960 to 33.9 percent in 1985 (compared to 38% in the general population). While the enrollment of Blacks in college has been declining since 1978, and this constitutes cause for concern, the reasons for this decline appear to be based more upon political and deteriorating economic conditions rather than academic factors. An analysis of the family income levels of Black college students reveals that more than half of them were under $20,000 a year, whereas only 15 percent of White students come from that income bracket (Reed, 1988). These statistics can be interpreted (although they are usually not) as indicative of the strength found in the Black family and a testimony to their belief in the positive value of education.

Despite lower income levels, Blacks are more willing than others to make the financial sacrifices required to send a child to college. Most Black college students drop out for financial not academic reasons (Reed, 1988). Despite these positive values associated with education, Black youth still can anticipate the economic consequences of a racist system that pays white high school dropouts more than Black high school graduates and where high unemployment and discrimination reduce the economic returns ordinarily associated with education and training (Larson, 1988).

III. SERVICE DELIVERY ISSUES

A. Availability of Medical Care for Adolescent Health Problems

As noted earlier, Black teenagers are less likely than whites to receive either preventative health care (Children's Defense Fund, 1986b) or appropriate medical services. In a medical study of Black Job Corps volunteers, for example, it was found that only half of those who needed corrective lenses had them (Hayman & Probst, 1983). Dental services are also less likely to be available.

There are a variety of reasons underlying the lower accessibility of health care services for Black adolescents. Some of these were in discussed an earlier section on prenatal care. The primary causes appear to be financial inability to purchase private health insurance and the changed eligibility requirements for Medicaid for the working poor.

A recent analysis of the health insurance status of adolescents (Office of Technological Assessment, 1989) reveals that 15 percent of those between 10 and 18 years of age are without public or private coverage. The corresponding figure for poor adolescents is 30 percent. The proportion of uninsured adolescents increased by 25 percent in the 1980's because of limitations put on Medicaid eligibility. In this study the most important determinant of coverage was family income.

In the absence of insurance coverage or funds to pay private physicians' fees, inner-city youth are most likely to turn to public clinics and hospitals. Although many of these services are adequate, many more are understaffed, have less well-trained foreign doctors, are under-financed, and have outmoded equipment. The emergency services of public hospitals are often scarcely able to cope with the quantity of presenting problems. A recent article in the New York Times (French, 1990), for example, described over-crowding at Harlem Hospital, where 16 patients awaiting admission were being treated in the hallways on stretchers. Thus, significant numbers of Black adolescents appear to be severely under-served by our present system of health care delivery.

B. Mental Health System Delivery

It has generally been recognized that there is an acute need for assistance (e.g., Hamburg, 1989) for mental health and psychosocial problems, both at the treatment and preventative levels. This is not because adolescents exhibit more severe emotional disturbances than other groups. Epidemiological studies have estimated this percentage at 10-20 percent, a figure comparable to the adult population (Powers, Hauser & Kilner, 1989). Rather this need is due to the absence of research, trained professionals, and programs aimed specifically at adolescents. Until recently, health professionals have failed to document and recognize their special needs.

There are additional issues which are particularly germane to Black youth. These include problems of access (because of unavailability of services or financial inability) as well as problems of cultural match between patients and therapists. There is a lack of inner-cultural training among white mental health professionals and insufficient numbers of Blacks entering the mental health field. Blacks, for example, constituted only 1.8 percent of the psychiatrists belonging to the American Psychiatric Association in 1984 (Liu & Yu, 1985). White therapists are often ignorant of the dynamics and interpretations of Black behavior in therapy (Allen & Majidi-Ahi, 1989), and may, therefore, reach erroneous conclusions or pursue ineffective strategies.

The need for inpatient treatment often required for diagnoses of psychosis is met in the less affluent by state and county mental hospitals. In 1984 there were 280 such hospitals, with an occupancy rate of almost 90 percent (DHHS, 1986). Black patients constituted 18 percent of these admissions. In 1980 26 percent of mentally ill Blacks were in state and county mental hospitals, 20 percent in VA Medical Centers (but not typically adolescents), 15 percent in non-Federal general hospitals, and 12 percent in private psychiatric hospitals. As previously noted, even within mental health settings, Black adolescents often obtain less optimal care than whites. The conduct disorder behaviors of Black adolescent males are also much more likely to result in their commitment to a correctional institution. In 1980 for every thousand Black males aged 15-24, 2.02 were inmates of mental hospitals; whereas 26.65 were in correctional institutions.

As noted earlier, services for the treatment of psychosocial problems, such as substance abuse, are particularly sparse. Little work has been done on development of substance abuse treatment programs specifically for adolescents. Falco (1988) estimates that only five percent of the 3,000 facilities organized to treat drug and alcohol abuse served predominantly adolescent groups. Most teen referrals (typically made by the juvenile justice system) are made to drug-free programs, which include drop-in centers, clinics, and challenge experiences (such as Outward Bound). Many are also sent to residential programs or alternative schools that provide counseling, education, and social activities. Residential programs appear to be more effective than drug-free programs. The most successful programs are those that obtain family involvement.

Preventative programs for substance abuse have received more attention, and the general strategy of prevention seems more promising (Polich, Ellickson, Reuter, & Kahan, 1984). Most of the commonly-used approaches, however, do not seem to work very well. These include moral exhortation, fear-provoking programs, increased information (which sometimes arouse interest to try the drug), and programs aimed at developing values and interpersonal skills in a general context (Falco, 1988). Media efforts in the form of anti-drug public service announcements have also not been particularly efficacious, perhaps because of the redundancy of ads proclaiming the value of taking legal drugs for so many ailments.

The most successful programs are those that focus on factors involved in the initiation of drug use and that train children how to withstand peer pressure. This psychosocial approach has been effective in smoking prevention efforts directed at middle-class white early adolescents (Polich, et al., 1984) but has not yet been as widely used with alcohol, marijuana, or cocaine use prevention. One recent program called Project Alert is currently being undertaken in California in a longitudinal study starting in seventh grade (Ellickson, Bell, Thomas, Robyn & Zellman, 1988).

The bulk of federal funds in the drug area have gone into law enforcement rather than prevention. Nevertheless, it is estimated that only 10 percent of all the heroin, cocaine, and marijuana coming into this country are intercepted (General Accounting Office, 1983). The illegal status of drugs does not seem to serve as very much of a deterrent since 62,000,000 Americans have used marijuana, and 22,000,000 have tried cocaine, described by Holden (1989) as "the most powerful reinforcer known" (p. 1378).

The Family Support Act of 1988 mandated a number of special services for pregnant and parenting teens, and these have been interpreted differently by the various states. Few pregnancy prevention programs have been carefully evaluated, however, in part because of lack of funds and because of the multiple difficulties involved in assessing this sensitive area. Traditional sex education programs that do not focus on contraceptive use increase student knowledge but seem to have little effect on their attitudes or on their contraceptive use (Kirby, 1985). Ladner (1987) notes, however, that only three geographical areas have mandated sex and family life education programs for the full school range (kindergarten through 12th grade). Even these are often not implemented because of controversy.

The most effective pregnancy prevention program for females appears to be a combination of receiving information about sex, pregnancy, and contraception prior to the time sexual activity is initiated (Dawson, 1986). Despite this, however, the Adolescent Family Life Act of 1981, which funds pregnancy prevention efforts, specifically prohibits grantees from using funds to provide information about contraceptives. Abortion funding, counseling, and referral are also specifically prohibited. Programs which have provided both information and contraceptives, such as those in St. Paul, Minnesota, have halved the teenage birth rate from 1976 to 1984 (Rosaeur, 1988). Despite the fact that surveys show 80 percent of adults in favor of providing sex education and contraceptives (Harris Poll, 1988 cited in Center for Population Options paper), institutions seem rarely able to muster the courage required to buck controversy. Thus, even while the effectiveness of providing contraceptives has been shown, eight states have recently forbidden school-based clinics to provide them (English & Tereszkiewicz, 1989).

C Alternative Health Care Systems for Black Adolescents

Every helping professional who comes in contact with Black adolescents is more than likely presented with cultural experiences that are at variance with his or her own culture. These differences are likely manifest in values, attitudes, and personal and professional experiences. It is therefore incumbent upon health caretakers that some effort be made to examine and understand these differences in order to raise the probability of a successful outcome. Therapists, for example, need to understand how the presentation of symptomatology is affected by cultural influences. The practice of viewing difference as pejorative has led to the development of deficit explanations or theories in interpreting the behavior of Blacks. In the 1970's Blacks not only began to challenge deficit models of Black culture and family, but also began to develop alternative models (Jones & Korchin, 1982; Hill, 1972; Stack, 1975).

1. Family Community Networks. The role of Black families in American institutional life entraps them in positions of great vulnerability. To some degree this is attributable to their pivotal function as recipients and "circuit-breakers" for stress, conflict, and confusion. On the other hand, Black families have been characterized by strong work orientation, high achievement orientation, strong kinship bonds, strong religious orientation, and flexibility in roles (Hill, 1972).

The Hallmark of adolescent years is change. Adolescence is characterized by upheavals and conflicts associated with making the transition into adulthood. Jessor (1984) elaborates five implications for behavioral health inherent in the adolescent life stage:

* Health-compromising (e.g., drug use, sexual promiscuity) and health-enhancing (e.g., diet, exercise) activities are initially learned and tried out.

* Many of the psychosocial attributes that influence and regulate the occurrence of health-related behaviors are also acquired or consolidated.

* The exaggerated influence of peers and changing norms increase the likelihood of nonconventional and health-compromising behaviors.

*The pervasiveness and rapidity of personal and social change is a source of adaptation pressure.

* A synchrony of changes can be stressful and problematic for health. For example, the attainment of reproductive maturity and sexual interest in the face of conflicting societal norms and prescriptions of sexual activity can be a source of trauma with health implications.

Management by parents and professionals during this time is especially difficult. For Black urban adolescents these concerns are compounded by problems of poverty, illiteracy, unemployment, and racism. The consequences of these bleak circumstances for many Black youths are revealed in the high rate of institutionalization (psychiatric and correctional) and difficulty surviving the school system successfully (Kramer, Rosen & Willis, 1973; Jones, 1973). Ogbu (1978) cites the equally stressful circumstances shared by the families of Black adolescents. These models have been useful in explicating the strengths found in Black culture and family life. Additionally, they afford avenues to uncovering alternative coping mechanisms -- specifically among Black adolescents. In addressing alternative services available to Black youths, family involvement figures prominently in a number of approaches. In addition to the family there are a variety of supportive groups in Black communities -- cultural groups, church groups, activity groups, therapy groups, service centers, jobs and business organizations, and other informal networks. These sites are often used to solve personal and community problems (Gary, 1978). Additionally, Hill (1972) has identified key strengths in Black family life: strong kinship bonds, adaptability of family roles, strong religious orientation, and strong educational and work orientations.

a. Informal Adoption has been and continues to be an effective strategy used in stabilizing Black families. Sociologists have paid a great deal of attention to strengths in Black families (Billingsley, 1968; Hill, 1972; White, 1980; Stack, 1975; McAdoo, 1981). Informal adoption among Black families has a long tradition. Hill (1972) describes the tradition of "doubling up" in which Black families have taken in other children and the elderly. This practice, dating back to slavery, has been a source of social, psychosocial, and economic support for many Blacks. This process of "child-keeping" (Stack, 1975) is a valuable resource for Black adolescents who are without family, or who runaway from their nuclear family.

Another importance of informal adoption lies in the fact that Black children are notoriously more difficult to place through formal adoption practices than white. The Black family then becomes a vehicle through which a number of uncles, aunties and other participate in the rearing of any one Black child (White, 1980).

b. Genograms are used in Family Therapy to help track and utilize the totality of family patterns. Kinship ties and extended family networks broadened the focus of nuclear family therapy (Perry, 1963; Speck, 1964). These "network" therapists, along with others, recognized some time ago that the basic social unit for the Black adolescent may not be the nuclear family, or even a family kinship, but a collage of persons united through a psychosocial kinship network. These observations led to the establishment of therapy groups that included not only the nuclear family, but also persons related by blood, marriage, friendship, neighboring residence, and/or work association. Brisbane and Womble (1985) note that many Black teenagers have adult confidants, social or blood relatives (other than parents) whom they take into their confidence. Specifically, they advocate utilizing the informal support system in treating Black adolescents for alcoholism. In order to understand better extended ties beyond the nuclear family, clinicians needed a system in which information could be gathered and organized. For these purposes the "genogram," which is based on the concept of the family tree (genealogy) was devised (Guerin & Pendagast, 1976). The genogram, borrowed from the field of anthropology, allowed therapist to organize and structure important information about the roles of family members, their interrelationships, and their conflicts.

Boyd (1983) asserts that the genogram has been an essential part of her treatment process with Black families. Further, she argues that caution must be used inasmuchas the genogram requires the gathering of important "family secrets" which are not readily shared with strangers, or even clinicians prior to the establishment of a relationship of trust. To date little research has been conducted on the genogram, but its potential usefulness with Black adolescents lies in the way in which intricate kinship patterns that seldom completely conform to bloodlines can be organized. Further, this outcome can shed light on important adjustment issues with Black adolescents. Research on the genogram with Black adolescents should be encouraged.

2. The Church. One of the most important institutions in Black communities is the church. Hill (1972) cites the way in which Blacks learned to use religion as a means to survive. The Black church provides an emotional release of tensions accumulated through experiences faced in an oppressive society. Singing, preaching, and

social exchange all help to promote solidarity and a sense of attachment and identity. The Black church is more than a religious institution; it is a viable mental health resource. In a study by Wright (1976) more than half of surveyed parishoners approved of a person talking over problems with the pastor.

From diverse areas of the world (Africa, Caribbean, Central and South America) Blacks have brought different beliefs and practices regarding health and illness. Blacks who experience unendurable stress have access to a folk medical system, which is viewed as an alternative health system. For many Blacks, health beliefs and practices have been their roots in African culture, early European folklore and religion -- herbal medicine from Africa, the voodoo religions of the Caribbean, Fundamental Christianity and magic (Dennis, 1979). There is a healing system composed of spiritual advisors whose function is to heal the sick. The range of treatments includes herbs, roots, religious rituals, and faith healing. Treatment can sometimes include items worn on the body to ward off danger (e.g., amulets), items used in the home to keep away evil spirits or to bring good luck, candles, incense, voodoo dolls, and ritual kits (Snow, 1979). Four major categories of folk healers were identified in Atlanta:

- Root doctors who operate herbal shops.
- Faith healers including prophets and denominational ministers.
- Magic vendors who sell magical and religious objects to spiritual believers for cures.
- Neighborhood prophets who catered to clients seeking help for emotional and personal problems.

Yet, few clinicians utilize the relationship of religion in the lives of their Black clients as an aspect of the treatment process (Boyd, 1977). Religious-social networks in which the minister and other congregants take on aspects of an extended family represent important social services provided by Black churches. For example, counselors at the Harlem Interfaith Counseling Service, a Black agency in New York City have noted that many of their clients also receive mental health and other forms of assistance from churches -- especially during times of crises (Boyd, 1983).

The impact of church networks becomes even more apparent when one observes the support systems of patients in hospital settings. Not only are ministers and other parishoners conspicuous among visitors to patients, they also serve as a community support system after discharge. Because of the involvement of the church in Black family life many Black adolescents are able to take advantage of pastoral counseling during troubled times, and in some instances ministers have agreed to serve as "cotherapist" in family therapy settings. Religion has also been used as a vehicle for explaining and manipulating "reality" among some Black patients -- especially adolescents (Allen, 1988). Black alcoholics can be helpful in greater numbers through Alcoholics Anonymous if emphasis is placed on the spirituality that exists in the Alcoholics Anonymous program. In treating the Black teen alcoholic many authors cite the importance of the church, in addition to employee assistance programs, and other social action and community organizations (Gray & Lanier, 1985; Okpau, 1985; Brisbane & Womble, 1985).

Rastafariansim has figured prominently in explanations of mental health, especially among West Indians at home and in countries where they have migrated. The cult identifies strongly with African Blackness and rejects Western culture as decadent, and views Christianity as a system of Black oppression and exploitation. Although Rastafarianism is mostly religion, it is also a form of political protest -- and more important a self-help economic movement (similar to the Black Muslims). Members wear their incut hair in "locks," live in communes detached from society, and commonly use marijuana to aid meditation (Allen, 1988). Upper and middle class and socially mobile adolescents, in rebelling against authority assume Rastafarianism as a negative identity and repudiation of parents and society. This circumstance often presents along with the depression and anxiety associated with an adolescent identity crisis. Lanternari (1965) describes Rastafarianism as a logical form of indigenous self-understanding and meaning especially for the rural underclass and the urban ghetto poor at the bottom of a color-class system.

Schizophrenic, schizotypal, and to some extent manic-depressive patients use Rastafarianism as a means of compensating for identity loss and the search for meaning (Allen, 1988; Rack, 1983). However, Rastafarians are usually productive and as well integrated as the average population. Some clinicians believe that the Rastafarian life-style and belief system may have a protective function in an alienating society (Rack, 1983).

3. Community Based Paraprofessionals. Black low-income families often do, or cannot, make use of office-base or hospital facilities. Epstein and Shainline (1974) conducted an experimental program designed to provide paraprofessional parental-aide service to low income Black families. The major feature of their program consisted of parent-aides providing in-home counseling and guidance. Parent-aides provided the sole therapeutic intervention while maintaining consultation with an office-base mental health practitioner. Results of the study indicated that in-home interventions can be crucial to effective outcomes in that many more counselor-client interactions and observations take place than is possible in a traditional office setting. Differences were less likely to be labelled as pathological, barriers between counselor-client were easier to surmount, and telephone communications occurred more often than is the cause in traditional settings. This program, while only experimental, offers possibilities for reaching greater numbers of Black adolescents who are shut out from traditional services for a variety of reasons covered elsewhere in this paper.

Whitten (1979) in her review of Epstein and Shainline's experiment cautions that this approach should not be used simply to cut cost of traditional therapeutic interventions, but should be incorporated into traditional approaches as an augmentation of existing applications. Black families could well benefit from mental health teams that combine the parent-aide approach with in-office services. Paraprofessionals may also serve a facilitating role in helping Black families and their adolescents feel more comfortable with traditional systems.

4. The School. Schools are not only settings in which children receive preparation for formal credentials, they are also involved in the socialization process. In the latter instance the school represents an important community resource through which children are exposed to peer contacts and other influences that extend, and in some instances replace, training received at home. Although we have not found any special programs that represent alternatives to traditional health-giving services, we do note that the need for special education services is an important aspect of health care management. Along with individual and/or family therapy, psychopharmacological intervention, and behavioral management, practitioners must be sensitive to circumstances that indicate a need to intervene in the educational process. Evidence of emotional, behavioral, or developmental problems provides useful insights into reasons for poor school performance.

The federal mandate of PL94-142, enacted by the 94th Congress in 1975, makes it possible to design individualized programs of instruction for any individual with a handicapping condition (Ballard, 1977; Ballard, Nazzaro & Weintraub, 1976; Federal Register, 1977). The basic components of the law include the following:

*The right to a free, appropriate education at public expense
*Nondiscriminatory and multidisciplinary evaluations in the child's primary language
*Development of an individualized educational plan
*Provision of necessary related services, such as transportation or physical therapy
*Safeguards such as written notice to parents of any program changes, permission from parents prior to any assessments, and parental access to all school records

*Due process with an impartial hearing if the parent challenges the decisions of the school

Yohalem and Dinsmore (1978) cite the related Rehabilitation Act of 1973 (referred to as Section 504) as Civil Rights law which prohibits discrimination against any handicapped person in programs receiving federal funds. Further, it provides for program accessibility and availability of nonacademic services. Thus, the educational system offers an opportunity through PL94-142 and the related Rehabilitation Act of 1973 to provide special academic and nonacademic programs to Black Adolescents.

5. School-Based Clinics. As noted earlier, one of the major barriers to appropriate health care for adolescents is accessibility in terms of geographic location and financial reach. Additionally, adolescents are often mistrustful of adults and would, therefore, not be likely to return to places which seem insensitive to their concerns. One of these concerns is confidentiality, which seems perfectly understandable, given the nature of the psychosocial issues with which they are dealing.

One of the most promising approaches to health services for Black adolescents is the school-based health clinic, which appears to overcome some of the aforementioned barriers (Donovan & Waszak, 1989). As Millstein (1988) notes, the problem behaviors of adolescents are complex, inter-related, and unresponsive to simple interventions. Thus, a comprehensive approach appears to be needed, which is often provided in school-based health programs.

While these programs currently serve less than one percent of the adolescent population, they do seem to be aimed at minority youth (50% of all such clinic users are Black), and they offer a wide array of important services. These range from physicals (21% of services, including those for sports), treatment of acute illnesses (25%), mental health counseling (11%), reproductive services (10%), treatment of achne (4%), chronic illnesses (4%), and other conditions including hearing and vision problems (20%) (Carnegie Corporation, 1989). These services are offered at low-or no-cost, are easily accessible in the school, and comprehensive in their offerings as well as their referral networks. Judging from the high (71%) average enrollment rate, and the relatively low cost of $50 to $150 per student per year (Millstein, 1988), one can infer that they are being well-received, are sensitive to adolescents, and are quite cost-effective.

IV. CONCLUSIONS

Although psychologists no longer think of adolescence as a time of invariable storm and stress (Powers, et al., 1989; Hill, 1987), it clearly can be for some. Adolescence is a developmental period that represents the congruence of physiological sexual maturity, enhanced abstract cognitive capacity (Piaget, 1972), and the formation of adult identity (Erickson, 1959; Marcia, 1966). For many adolescents this confluence of factors increases their levels of stress. Adolescence entails multiple changes. The advent of adolescence also has significant impact upon families. As Powers, et al., (1989) note, "Not only do families affect adolescent development, but aspects of adolescent development (e.g., puberty and cognitive changes) affect the life of the family" (p. 203).

For many adults looking back upon adolescence is problematical, particularly for those who did have considerable conflict. Additionally, parents seem to expect to have difficulty with their children during this developmental phase. Perhaps for these reasons many adults have negative attitudes towards adolescents. While the associated physical development is universal for teenagers, this development does not occur in a vacuum. The nature of the adolescent's social and physical environment clearly influences their goals, their values, and their behavior. We have reviewed in this paper the particular vulnerabilities of Black adolescents. We have noted that they are more at risk for a variety of health and mental health problems than their white counterparts, and that their accessibility to treatment and preventative services is often lower than average. Black adolescents may represent a particularly vulnerable group not only because of the high incidence of poverty, but also because they may represent a "double whammy" in terms of discrimination. The combination of adults' negative attitudes towards adolescents combined with increasing racism (Katz & Taylor, 1989) may be eliciting particularly negative reactions to Black teenagers. It could be argued that adolescents represent the epitome of negative stereotypes against Blacks in terms of violence and sexuality and, thus, are particularly prone to elicit fear and negative reactions from whites.

This paper underscores the barriers to prevention and treatment faced by Black youth between 10 and 18 years of age. The paper is divided into three sections. Section I focuses on cultural factors in service delivery; Section II focuses on health issues; and Section III focuses on service delivery. In todays society it is very apparent that Black adolescents are currently underserved by the present systems of physical and mental health services. A large number of Black adolescents come from single-parent families who earn less than the poverty-level wages. The increase in single-parent, mother-headed families is having an adverse effect on adolescent males. These males are deprived of suitable role models in their formative years. Many have come to believe that poverty is a way of life for the "lower-class."

The plight of urban ghettos is a product of its physical isolation and economic distress. Unemployment has created an even more stressful situation. Stress is related to a variety of physical and mental health disorders. Black adolescents are especially vulnerable to mental health problems because of their minority status. The general health status of Black adolescents also has been adversely affected by political and economic factors. These circumstances are not restricted to U.S. citizens of African descent, it also holds true for members of Black subpopulations. Other contributing factors to poor health and morbidity are: racism and discrimination, unfulfilled expectations, life in the inner city, limited opportunities, as well as, rising poverty, social disruption, teenage pregnancy, alcoholism, and divorce. These factors aid in producing maladjustment placing Black adolescents at-risk for more serious problems such as: suicide and homicide, school dropout, unemployment, addiction, incarceration, and a reduced lifespan. Good health includes health education, nutrition, and access to health care. Low income families, however, have little or no public or private health insurance. Black teens are constantly faced with the problem of no health insurance, fear of medical procedures, the mindset in females of being pregnant. Lack of access to health care has a tremendous effect on the health of the infant and often brings about low birthweight which contributes to infant mortality, poor health, lower attention spans, and a greater incidence of learning disorders.

Adolescents are perplexed by their unexplained depression which has caused in many cases fatigue, a loss of appetite, and difficulty in completing daily assignments. Some of the Black teen depression and aggression and anti-social behaviors lead to trouble with the law, substance use and abuse and educational problems. The many forms of substance abuse includes alcohol, nicotine, marijuana and cocaine (crack). The links between drug use and behavioral problems result in delinquency, school failure and the absence of employment. Academic problems occur more often in youth who are delinquent, drug abusers, and/or pregnant.

The inaccessibility of health care for Black adolescents is aggravated by: a) inability to purchase private health insurance and b) change in eligibility requirements for Medicaid. These barriers cause adolescents to turn to public clinics and hospitals, which are too few and not ideally accessible. One drawback is that most of these facilities are staffed by less well-trained foreign doctors and are equipped with outmoded equipment. There is a dire need for more Black trained professionals in the mental health field to pursue effective strategies. At present, there are limited programs for treatment of substance abuse and no effective programs in alcohol use and pregnancy prevention.

There are some positive initiatives within the Black community to provide adequate programming for Black adolescents: (1) Family community networks have been established to retain a strong sense of work ethics, high achievement, strong kinship bonds, strong religious beliefs and flexibility in roles. Family portrays a very prominent role in the Black community. Other support groups to provide assistance to adolescents are: cultural, church, social therapy, jobs and business organizations and other informal networks. (2) Alternative families/extended families have been established as a kind of "informal adoption" which helps to stabilize Black families. These units help support adolescents that are without blood relatives or those who have run away from the nuclear family. (3) Genograms are also being used as an aid to help organize information on family members, interrelations and their conflicts. (4) The church is also a viable mental health resource that allows for an emotional release of tensions faced in society. Black adolescents tend to take advantage of pastoral counseling during troubled times. (5) Assistance is also being provided by community-based professionals to provide parent-aid for in-home counseling and guidance. (6) The school not only serves to provide a formal education, but also as an arena in which the socialization process is facilitated. Adolescents who demonstrate evidence of emotional, behavioral and developmental problems provides useful insights to reasons for poor school performance. As indicated earlier, a number of teens do not have access to health clinics. School-based clinics have provided an effective alternative for providing health care needs.

Despite the alternative remedies described above, there is a continuing need for local, state, and federal programs to bring parity in health care for all Americans -- especially Black Americans. To accomplish this, major initiatives will be required, to include but not limited to: drug abuse programs to include treatment and education regarding AIDS in the Black community; clinical programs for the detection of sickle cell disease in newborns; teen pregnancy counseling and improved prenatal care facilities.

Adolescence brings with it a general increase in risk-taking behavior. Many of the behaviors that are problematical during the teenage years would be less so in adulthood. Many non-health enhancing activities, such as drinking and smoking, are age-graded and are, therefore, symbolic of growing up. The fact that so many high school seniors have tried alcohol and other drugs would seem to corroborate this. Within this context, however, there are clearly those that engage in a variety of abusive behavior. In studying adolescent transitions to nonhealthy behavior, Jessor & Jessor (1977, 1984) found that a proness to problem behavior cuts across many areas. In a longitudinal study beginning with pre-adolescents, these investigators found that youth prone to problem behavior had the following characteristics: a high concern for personal autonomy, a lack of interest in conventional goals, a jaundiced view of society at large, and more tolerant attitudes about transgressions. Although their study was conducted primarily with white adolescents, many of the factors associated with higher rates of problem behavior appear to be those that are also characteristic of Black adolescents, particularly those who are poor and live in inner cities.

Continued exposure to racist incidents elicits jaundiced views of society. A poor educational system and a deteriorating economy make conventional goals particularly problematical for this group. Finally, the relative absence of successful conventional role models and alternative avenues to financial success may well make many inner-city youth more tolerant of illegal behavior. As Jessor (1984) notes risk behaviors like all learned behaviors are not random. They are purposive, goal-directed, and capable of fulfilling multiple goals. Even though the behavior may ultimately get the adolescent into trouble, he or she may be engaging in it for a variety of reasons. These reasons frequently include attaining independence, expressing their solidarity with peers, coping with anxiety, expressing opposition to adult authority, or affirming their maturity. This view suggests that a deeper understanding of the kinds of psychosocial problems that afflict adolescents in general and are found in greater frequency in Black adolescents should entail an understanding of the adolescent's motivations and not simply the consequences.

It would appear from our review that neither medical nor psychological practitioners have been particularly successful in designing programs that adequately deal with the psychosocial issues of adolescents. As noted previously in this paper, these are interrelated and complex. What might improve our prevention and treatment programs is a better understanding of the developmental and social issues that are involved in adolescent acting-out behavior.

One of the implicit expectations society has for adolescents is that they will find a path that will enable them to enter adult roles successfully. Society implies that they will become capable of attaining their full intellectual, emotional, and behavioral potentials, both for their own mental health and for their contributions to societal productivity. Attainment of these goals has been labeled "self actualization" by Maslow (1970). The concept of Maslow's hierarchy of needs may be particularly applicable to understanding the development of Black adolescents. Within this theoretical system each level must be satisfied for the next one to take precedence. Thus, before adolescents are capable of self actualization, they must have had their physiological needs (hunger), needs for safety, needs for belongingness, needs for love, and needs for self-esteem satisfied first, in that order. As we have demonstrated, inner-city Black youth are often hungry, they live in an unsafe environment, they do not feel as if they belong, and they are subjected to other ecological realities that would appear to make it often difficult to establish positive self-esteem. While we certainly would endorse the provision of additional health and mental health services to this group, we suggest that the problems are best dealt with in a pro-active spirit. The symptoms have to be treated, but the underlying issues need to be addressed.

The United States ranks tenth among industrialized countries in rates of adolescent morbidity and mortality (National Center for Health Statistics, 1988), and as we have shown, Black adolescents contribute disproportionately to all of these statistics. Because so many of the factors underlying these trends can be changed, the lack of health in this group reflects the lack of health in our society.

The best test of every human institution is how much it contributes to bringing youth to the ever fullest possible development (Hall, 1904).

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HEALTH AND RELATED SERVICES FOR ASIAN AMERICAN ADOLESCENTS

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EXECUTIVE SUMMARY

Asian and Pacific Island Americans, whose numbers exceeded 3.7 million in 1980, represent the fastest growing ethnic minority population in the United States. The population is composed of more than 20 distinct groups (e.g., Chinese, Filipinos, Japanese, Vietnamese, and native Hawaiians). It exhibits marked within and between group differences in histories, immigrant/refugee/American born status, cultural practices, acculturation levels, English proficiency, socioeconomic status, health/mental health needs, and service utilization patterns--differences that are obscured by popular stereotypes and by the lack of research-based knowledge of these groups.

Even less research has been conducted on Asian American adolescents, so that analysis of these adolescents must be based on existing information on the Asian American population as a whole and on inferences that can be drawn. The available evidence suggests that this population has a number of health/mental health needs and that these needs have been inadequately addressed in American society. For example, because of relatively high smoking rates and dietary intake of sodium among many Asian immigrants, there is an increased risk for certain diseases. Asian Americans also have a high prevalence of Hepatitis B, which can lead to liver cancer. Not much is known about the prevalence of other diseases among Asian Americans. With respect to mental health, there seems to be little question that many Asian Americans are under a great deal of stress because of cultural conflicts, English language limitations, prejudice and discrimination, traumatic experiences in their native countries (e.g., Southeast Asian refugees), etc. While no major epidemiological studies have been conducted on the prevalence of mental disorders among Asian Americans, it should be pointed out that extremely high levels of depression and posttraumatic stress disorder have been found among certain Southeast Asian groups. The stress factors affect not only adults but also adolescents. Furthermore, intergenerational conflicts between adolescents and parents or extended family members are additional sources of stress. They often involve independence versus obedience, achievement orientation, and racial or ethnic identity.

Despite their needs for health and mental health services, Asian Americans have frequently avoided using mainstream services because of cultural factors and because of the unresponsiveness health care to their cultural traditions. Asian culture is "face" oriented, which means that a family's appearance and status are considered extremely important. Asians may avoid using services for certain problems (e.g., mental health and AIDS), since to use such services would let others know that the problems exist, resulting in a loss of face for the family. Some Asian Americans have been found to have different conceptions of health and mental health and to seek caregivers who provide services that are consistent with those conceptions. Cultural differences are also found in communication styles, problem solving strategies, etc. Perhaps the greatest problem facing Asian Americans is the unresponsiveness of services to address their needs. Health care providers fail to provide bilingual-bicultural services and to appreciate the cultural values of their clients. For example, many Chinese are very fearful of having their blood drawn; many Asian Americans present somatic problems along with their mental disorders. Caregivers who do not know the cultural values and beliefs of various Asian American groups are at a disadvantage in providing effective services. This is especially true since the values of one Asian groups may differ from the other Asian groups. Since the parents and family members influence the values and behaviors of adolescents, adolescents share many of the same values and behaviors with respect to conceptions of health, shame and stigma, symptom expression, and utilization of services.

In view of the health and mental health needs, importance of cultural and historical experiences, and inadequacies in the service delivery system, several recommendations are presented. First, more health research must be conducted on Asian Americans in general. This is particularly true of Asian American adolescents for whom little empirical studies exist. Such research should be aimed at discovering the prevalence of health/mental health problems that exist, cultural values and behavioral patterns, and effective intervention/prevention programs. Second, researchers and providers must acquire a more realistic understanding of Asian Americans. The popular stereotype that Asian Americans have few problems is inaccurate. In addition, it is important to understand the tremendous differences that exist among the various Asian American groups, including differences within each group. Third, affordable and accessible services must be provided. Such services should have bilingual and bicultural staff who can appropriately communicate with different Asian American clients. Fourth, establishment of culturally responsive, multiservice centers involving a variety of health, mental health, and social services may improve utilization and effectiveness of care. Fifth, funds should be allocated to the training of bilingual and bicultural personnel who can serve Asian American communities. Service providers working in Asian American communities are often underpaid, and salary levels should be competitive enough to attract these providers. Sixth, aggressive prevention and education programs should be targeted to families and adolescents to promote health practices and knowledge of health problems, their consequences, and availability of services.

INTRODUCTION

Although Asian American groups are the fastest growing ethnic minority populations in the United States, little is known about their health/mental health status and service needs, particularly among adolescents (i.e., those aged 10 to 18). This paper examines the available knowledge concerning the health and mental health needs of Asian American adolescents. The objectives are to analyze (1) cultural factors that affect utilization and effectiveness of health and related services; (2) cultural influences on risk and protective factors for health; (3) needs of different Asian American groups including groups at risk; (4) problems in the delivery of services to meet the needs of Asian American adolescents; (5) effectiveness of parallel services that have been established to meet the needs of Asian American adolescents; and (6) policy and program changes that may better meet needs.

Population Characteristics of Asian Americans

An examination of health needs must be placed in the context of the nature of the population. The Asian American population (which is defined as including Pacific Islander Americans) is rapidly growing and diverse in nature. In 1980, it exceeded 3.7 million, easily doubling the 1.5 million figure in 1970 (U.S. Bureau of the Census, 1989). Furthermore, projections indicate that by the year 2000, the population will increase by nearly 100% from that in 1980 (Sue and Padilla, 1986). These increases can be attributed largely to immigration to the United States from China, the Philippines, India, Korea, Southeast Asia, etc., and secondarily to natural increases (births minus deaths and departures from the United States). Another important characteristic of the population is the diversity of different Asian American groups. More than 20 Asian American groups have been identified by the U.S. Bureau of the Census. Tables 1 and

2 show the 1980 population of the largest Asian American and Pacific Islander American groups. The three largest in descending order are Chinese, Filipino, and Japanese.

The diverse nature of the population is also revealed by the proportion of the population born in other countries. The vast majority of Vietnamese, Koreans, Asian Indians, Filipinos, and Chinese in the United States were born overseas. However, Samoans, Japanese, Guamanians, and Hawaiians were largely born in the U.S. (U.S. Bureau of the Census, 1989). About 70% of Asian Americans live in just five States--namely, California, Hawaii, New York, Illinois, and Texas.

Asian Americans tend to be young. While the median age for the nation was 30.0 years in 1980, the figure was 28.4 years for Asian Americans. A slightly higher proportion of Asian Americans, 30.2%, are under the age of 18 compared to the 28.2% figure for the entire nation. The percentage of Asian Americans under age 18 living with parents exceed that of the national average, 85% to 77%, respectively. Even with age, considerable differences can be seen within the Asian American population, with Japanese and Asian Indians having median ages that exceed the national average and with other Asian groups having median ages lower than the national average.

Other demographic characteristics revealed by the U.S. Bureau of the Census (1989) are important to note. Comparisons of the Asian American population to the nation as a whole do not markedly differ in percentage of females (52% to 51%) and married-couple families (84% to 83%). However, substantial differences existed on characteristics such as high school graduates aged 25 years and older (75% to 66%) and college graduates (33% to 16%); average family size (3.8 to 3.3 persons); labor force participation (67% to 62%); and median family income ($22,700 to $19,900)--although

Table 1
Distribution of Asians in the United States: 1980

Group	Number	Percent
Chinese	812,178	23.4
Filipino	781,894	22.6
Japanese	716,331	20.7
Asian Indian	387,223	11.2
Korean	357,393	10.3
Vietnamese	245,025	7.1
Lao	47,683	1.4
Thai	45,279	1.3
Cambodian	16,044	0.5
Pakistani	15,792	0.4
Indonesian	9,618	0.2
Hmong	5,204	0.1
Other Asians	27,210	0.8

Source: U.S. Census, 1980.

Table 2
Distribution of Pacific Islanders in the United States: 1980

Group	Number	Percent
Hawaiian	172,346	66.4
Samoan	39,520	15.2
Guamanian	30,695	11.8
Tongan	6,226	2.4
Fijian	2,834	1.1
Other P/Islanders	7,945	3.1

Source: U.S. Census, 1980.

poverty levels were similar (13% to 12%). It should be noted that considerable variations are found between different Asian American groups. For example, the median family income of Japanese Americans ($27,400) was strikingly higher than that of Vietnamese Americans ($12,800). Great variation also exists among Asian groups in educational attainment and achievement. The drop-out rates for Filipinos are substantially higher compared with other Asian groups and White Americans. This would suggest that the level of specific health risk factors such as drop-out rate may be quite different depending on the Asian group studied.

Given these population characteristics, several implications can be drawn. First, Asian Americans differ from the general population on many demographic characteristics. Findings concerning health/mental health needs and services based on the general U.S. population may not be appropriate. Second, Asian Americans are extremely diverse population. For example, some groups such as Japanese Americans are likely to be highly acculturated relative to recent arrivals to the U.S., such as the Vietnamese, in which over 90% were born outside of the U.S. Third, most groups must exhibit a great deal of within group variability. For example, among the Chinese, 63% are foreign born which means a substantial proportion of them are American born. Moreover, foreign born Chinese come from different parts of the world (e.g., mainland China, Taiwan, Hong Kong, etc.) and speak different dialects of Chinese, adding to the within group diversity.

Scope of Analysis

In addressing the health/mental health needs and services of Asian American adolescents, it is important to recognize that little is actually known about the Asian American population. Previous investigators have pointed to several problems in examining this population (Kitano, 1988; Leong, 1986; Sue and Morishima, 1982). First, relatively few empirical research investigations have been devoted to Asian Americans. For example, in an analysis of grants and contracts funded by the National Institute of Drug Abuse, the Administration for Alcohol, Drug, and Mental Health Administration found that not a single award had been made to study substance abuse among Asian Americans over a 10-year period (Administration for Alcohol, Drug, and Mental Health Administration, 1986). An examination of annual reports on health and vital statistics published by U.S. Department of Health and Human Services and the National Center for Health Statistics reveals little information on Asian Americans, except in a few special reports. If ethnic or racial statistics are presented, they typically include White, Black, and "other" Americans. Second, while health and mental health research has been conducted on Asian American groups, many of the studies lack adequate sample sizes or focus on unrepresentative samples. Third, some investigations have included different groups within the rubric of "Asian Americans" so that differences among the groups are masked; or researchers may study one particular group and be unable to draw conclusions concerning other Asian American groups. Fourth, as mentioned previously, the Asian American population is rapidly growing because of immigration. Time and resources have been inadequate in gauging the needs of newly arrived groups such as the Southeast Asian refugees. Consequently, the incidence and prevalence of health/mental health problems, service needs, and services provided are largely unknown. The situation is particularly problematic in the study of Asian American adolescents, since even fewer investigations exist on the subpopulation of Asian Americans in the age range of 10-18 years.

In order to examine the health/mental health needs of Asian American adolescents, one must, by necessity, base many conclusions on inferences and by the available evidence, which may be quite indirect. In addition, it is important to note that in the presentation of cultural factors that are associated with Asian Americans, considerable individual differences exist. Cultural factors, then, should be interpreted as a context for understanding Asian Americans, rather than a stereotypic statement of how all Asian Americans are. Finally, in view of the inadequate information on Asian American adolescents, it is necessary to examine what is known about Asian Americans and then to draw implications for the adolescent population.

CULTURAL FACTORS AFFECTING UTILIZATION AND EFFECTIVENESS

A number of factors affect utilization and effectiveness of health and related services. Some of the factors involve accessibility (e.g., including ease of using services, financial cost of services, and location of services), availability (e.g., existence of services), cultural and linguistic appropriateness of services, knowledge of available services, willingness to use services, and existence of alternative and competing services. Obviously, the nature of one's problems also influences utilization. For Asian Americans, only one major study exists that sheds some light on services and problems. Kim (1978) conducted a survey of problems and needs of Chinese, Japanese, Filipino, and Korean Americans (foreign and native born) in the Chicago area. Although the study was confined to respondents over the age of 18, the findings are important to review in terms of services considered important. Respondents were asked to rate the importance of certain services from a list that included child care center, English conversation class, mental health service, employment service, vocational training, public aid, bilingual referral service, and legal services (health services were not included). For the Chinese, bilingual referral service was the top priority with English conversation class as the second highest priority. In the case of Chinese, bilingual assistance in finding out about services that are available and in learning English were the services considered most important. For Japanese, legal aid services and bilingual referral service were listed as the most important. Filipinos indicated that legal aid services and child care center were important, while Koreans rated legal aid and English classes as the top two services. While the groups varied somewhat in their ratings of services, language and legal assistance appeared to dominate. Although these studies focus on the attitudes, behaviors, and situation of adults, they are germane to our understanding of Asian American adolescents. Parents not only determine the kinds of services that their children use, but also socialize their children to cultural attitudes and beliefs.

In this section, culturally-based factors such as shame and stigma, conceptions of health, and alternative services are presented as factors that affect utilization and effectiveness of mainstream services (i.e., services that are available to the general population of Americans).

Shame and Stigma

For many Asian American groups, cultural attitudes and beliefs must be considered in the assessment of service utilization. Particularly important is the concept of "shame" or "face." "Haji" among the Japanese, "Hiya" among the Filipinos, "Mentz" among the Chinese, and "Chaemyun" among the Koreans are terms that reveal concerns over the process of shame or the loss of face (Kim, 1978). The existence of certain problems in the family--problems such as juvenile delinquency and acting out behaviors, mental disorders, AIDS, poverty, etc.--is considered shameful and likely to bring disgrace on the entire family (Sue and Morishima, 1982). Consequently, many Asian Americans tend to avoid the juvenile justice or legal system, mental health agencies, health services, and welfare agencies, since the utilization of services for certain problems is a tacit admission of the existence of these problems and may result in public knowledge of these familial difficulties. For example, Asian Americans have been found to differ from White Americans in help-seeking behaviors for emotional difficulties. They are less likely to request outside help for these difficulties, turning first to their families for help and then to outside agencies or mainstream services as a last resort (Tracey, Leong, and Glidden, (1986). Although most Americans are likely to turn to their families as the first resource, and to feel shame or stigma over certain problems, the avoidance of mainstream services is more pronounced among Asian Americans. That is, there is a differential effect caused by the strong concern over loss of face among Asian Americans.

Because of shame and stigma, several consequences can be hypothesized. First, those behaviors that are likely to create shame and stigma are the ones that are most likely to be denied. Services for those behaviors tend to be underutilized. Second, the need for services is not equivalent to demand for services. Asian Americans may have needs for certain services that are not reflected in utilization patterns. Third, if services are avoided and used as a last resort, then problems may be exacerbated, since there is a delay in finding services Fourth, since Asian Americans pay taxes for services, they are not receiving their fair share of effective services. Finally, the behaviors of children and adolescents are considered a reflection of family upbringing. Therefore, parents may delay using those services for their children, if such services are needed for problems that bring shame upon the family. It should be noted that the shame associated with having health and mental health problems may be more acutely experienced by Asian Americans who tend to reside in immigrant communities. In such communities, there are great expectations for doing well in America for the sake of the family both in the United States and back in the country of origin. The personal networks in these communities are often extensive in which information about others is easily shared and disseminated. Within this context, the development of a health or mental health problem that may compromise a person's productivity or status can generate significant loss of face. Moreover, the need to seek outside help for such problems only exacerbates the shame.

Conceptions of Health and Mental Health

Health and mental health are strongly influenced by culture. Cultural influences help to shape (1) symptoms exhibited when one is physically ill or emotionally disturbed, (2) interpretations of the causes of disorders, and (3) interventions deemed appropriate to overcome health and mental health problems (Leong, 1986).

In a study of cultural differences in symptom expressions, Kitano (1969) found that Japanese schizophrenics compared to Caucasian schizophrenics were more likely to be withdrawn and to exhibit few acting out behaviors. He attributed the differences in symptom patterns to cultural factors, such as the tendency for many Japanese to react to stress by becoming more inward ("ga-man")--suffering without showing overt signs of agitation. For many Asians, there is a unity between the mind and the body, so that emotional disturbances are often reflected in somatic symptoms. For example, in a study of the symptoms exhibited by Whites, Blacks, and Chinese, Chang (1985) found ethnic differences in the patterns of depressive symptomatology. Cognitive concerns characterized the White group; a mixture of affective and somatic complaints were found among Blacks; Chinese were the most likely to exhibit somatic complaints in depressive symptomatology. Similarly, Tung (1985) argues that in the case of many Southeast Asians, somatic symptoms, such as headaches, insomnia, fatigue, loss of memory, and poor appetite, are quite common. These complaints represent a more legitimate means of expressing distress, since physical symptoms are less stigmatizing than having emotional or psychiatric problems.

Interpretations of the causes of physical and mental disorders are also influenced by culture. In traditional Chinese culture, many diseases or physical afflictions are attributed to an imbalance of cosmic forces--yin and yang. The task is to restore imbalance through proper diet, exercise, and psychosocial relationships with others. Essentially, this is a holistic approach to health. Kinzie (1985) notes many Southeast Asians have a folk tradition in which illness is believed to be caused by physiological factors or supernatural forces (e.g., the consequence of offending a deity or spirit). Thus, they may have an unwillingness or inability to differentiate between psychological, physiological, and supernatural causes of illness.

Because of these cultural factors that influence symptom expressions and conceptions of illness, it is apparent that Asian Americans are likely to differ from mainstream Americans in the types of interventions used to prevent or treat illness. The interventions may involve restoration of balance and holistic approaches: Use of herbal medicine, consultations with folk healers or fortune tellers, acupuncture, certain forms of exercise, etc., as discussed in the next section. Since parents are responsible for the care of their adolescent children, they are likely to refer their children to those services that are consistent with their cultural beliefs.

Alternative and Non-Western Forms of Healing Practices

In response to physical symptoms, many Asian Americans may seek alternative services or practices, such as herbal medicines, acupuncture, folk healing, and diet and exercise regiments, rather than Western forms of treatment. The extent of utilization of these alternatives among different Asian American groups is unknown, although it is probably higher among recent immigrants or those who are relatively unacculturated to American society. In a study of the utilization of medical care systems among Chinese Americans in Boston, Hessler et al. (1975) divided utilization patterns into Chinese medical care only, Western medical care only, predominantly Chinese care, or predominantly Western care. Demographic variables, as well as identification with being Chinese, predicted the type of health care sought. Not surprisingly, Chinese medicine is favored by those who are less acculturated to American society. Other Asian groups also have alternative forms of treatment.

CULTURAL INFLUENCES ON RISK AND PROTECTIVE FACTORS

Risk Factors

Dietary Habits

For Asian/Pacific immigrants and refugees, nutritional risks have been associated with the high dietary sodium contents of some traditional foods (Caplan, Whitmore, & Dui, 1984). These traditional dietary practices have been maintained through generations and transmitted by elders are not based on professional knowledge. Particularly for immigrants and refugees these dietary habits are significantly affected by social and economic factors. For example, Fishman, Evans, and Jenks (1985) note that the average immigrant household typically lacks the presence of extended family structures. Thus, dietary decisions are made by young Asian parents with relatively little knowledge of nutritional value and no elder guidance. With their poor English language capability, the impact of mainstream nutritional informational sources is virtually nonexistent. A recent study (Griego, 1989) found that Asian and Latino children have health problems similar to those previously found among Caucasian and Black children. Many of these children were overweight, has low cardiovascular endurance, and high cholesterol levels. In this Los Angeles sample, 38% of the Asian and Latino children had above normal cholesterol levels for children and 13% had cholesterol levels above normal for adults. By current health standards 40% of the boys and 45% of the girls were moderately to severely obese. Investigators predicted that these poor health trends will continue until better health education and physical education programs are developed for children and parents. As California Assemblyman Charles Calderon observed, "This is just the tip of the iceberg... The schools in this state are probably no different from the schools in other states. The irony is, these days we have whole industries built around weight loss and health, and yet our children are quietly disintegrating into poor health."

With regard to nutritional risks an area of great concern involves the growth status of Asian American children. There is some data to suggest a greater prevalence of linear growth stunting among Asian American children in comparison to either national standards or to the prevalence of growth stunting among white children (Centers for Disease Control, 1983). These comparisons were made from a population of low-income children who received publicly-funded services. For Asian American children less than 2 years old, the prevalence of low height for age was 8 - 13% in 1977-1978 and 17 -20% in 1979-1981 compared with the expected 5% prevalence of growth stunting for the national sample and the 9% prevalence among the white children for the five year period of 1977-1981. For Asian American children 2 - 5 years old, even greater differences in growth stunting rates were found -- 21% prevalence in 1977 and 33-37% during 1978-1981 compared with the expected 5% normative prevalence and 9% prevalence for white children. Although growth stunting occurs, it is unclear which nutritional risks are operative. There was no evidence of excess prevalence in Asian children in thinness (low weight for height) or obesity (high weight for height). Also, no discernible patterns of risk were evident based on the hemoglobin or hematocrit data.

Studies of the dietary patterns among Asian/Pacific groups indicate diets composed of food and seasonings which are very high in sodium. Popular foods include bean sauces, dried shrimp, dried salted fish, pickled vegetables, fish sauce, monosodium glutamate, soy sauce, salted eggs (Chew, 1983). While sodium restriction in diet is of obvious importance in moderating hypertension risk, this may be difficult to accomplish within the framework of traditional Asian food practices (Chew, 1983; Asian/Pacific Task Force on High Blood Pressure Education and Control, 1984).

Dairy products are also used to a much lesser extent among Asian and Pacific Islander groups than among the general population (Suitor & Crowley, 1984). Given the need for dietary calcium in the formative years this pattern poses as an especially high risk for immigrant and refugee youth. Compounding this problem is the fact that Asian families are often in communities where the traditional sources of dietary calcium in Asian diets (tofu, green leafy vegetables, fish) are not available or are supplanted by conveniently or economically available foods which are low in calcium (Kim, Kohrs, & Twork, 1984).

There is a clear need to educate Asians, particularly recent immigrants, about the nutritional content about foods commonly used in the United States. This is important because adolescents, being the most acculturated members of Asian families, are typically the most likely to adopt a Western diet.

Smoking

For the most part, smoking patterns follow patterns observed in the Asian country of origin (Frerichs, Chapman, & Maes, 1984). In studies of coronary heart disease among Asian and Pacific Islanders, Yano et al. (1988) reported that smoking was a significant risk factor for heart disease along with high blood pressure, alcohol consumption (inversely), and serum cholesterol. Kumanyika and Savage (1985) note that smoking among Asian and Pacific Islanders is clearly a risk factor associated with males and age.

Most Asian immigrant groups, including youth, have a higher prevalence of smoking than their U.S. born Asian counterparts. Yee and Thu (1987) found that 45% of the Vietnamese in their sample reported trouble with drinking alcohol and/or smoking tobacco although other drugs were not seen as problematic. Further, a significant number of those respondents viewed alcohol and smoking as acceptable ways to cope with stressful situations, and to alleviate problems associated with stress.

Stress

Stress associated with the immigration and refugee experience often has caused or exacerbated the health and mental health problems of these Asians. Uprooted from their own culture with little or no preparation for the lifestyle facing them in the United States, the unique needs of the recently arrived Asians have often been overlooked (Sue and Morishima, 1982). Medical practitioners are often unaware of the health risk status of many Southeast Asian refugees. Compared with the general population, refugees are at higher risk for developing tuberculosis (14 - 70 times), have a greater proportion of chronic carriers of hepatitis B, a major risk factor for primary hepatoma and cirrhosis (Lin-Fu, 1988). This population also has a higher prevalence disorders seldom seen in the United States including alpha and beta thalassemia and hemoglobin E disorders, nocturnal sudden death syndrome, cholera, malaria, and leprosy (Hoang & Erickson, 1985). Refugee infants and children are known to have a high incidence and prevalence of baby bottle tooth decay and dental carries. Finally, numerous mental health problems have been linked to the trauma from the migration and resettlement camp experiences. Adolescent refugees often suffer from a delayed onset of chronic Post Traumatic Stress Disorder syndromes and depressive disorders. Often these problems are first manifested in the form of physical, medical complaints (Kinzie, 1985).

Alcohol and Substance Use and Abuse

It is commonly known that excessive alcohol and substance use places an individual at greater risk for the development of health problems. Alcohol and substance use and abuse has become an increasing concern for certain Asian communities. In their review of the substance use and abuse research on Asian populations, Zane and Sasao (in press) concluded the following: (1) It appears that alcohol use has been underestimated, particularly for the certain Asian groups such as the Japanese and Filipino males; (2) there is some evidence which suggests that a major substance abuse problem for older Asian groups may involve the use of barbiturates; (3) cultural factors appear to play an important role in limiting and at other times enhancing substance use among certain Asian groups; (4) the past research has not been very informative because it is usually unclear which Asian groups is being studied. More importantly, they note that the Asian groups which appear at highest risk for developing substance abuse problems have been seldom studied. It is highly likely that the estimates provided by these data will soon be outdated and gross underestimates because many of the groups with the highest social risk factors (i.e. Southeast Asian refugees, Koreans, and Filipinos) are the fastest growing groups in the Asian population. Whereas the Japanese and Chinese constituted the largest groups in 1970, it is estimated that by the year 2000 the Filipinos will be largest group followed by the Chinese, Vietnamese, Korean, Indian, and Japanese. Thus, in the near future there will be significant changes in socio-demographic and ethnic profile of the general Asian Pacific population which undoubtedly should be associated with certain changes in substance use and abuse patterns.

Cultural Attitudes toward Health

Cultural orientations of Asian/Pacific Islander populations affect conditions in which health risks and problems are identified, the very definition of the problems, the causes attributed to them, and the preferred modes of coping and help-seeking. While there are a host of culturally derived Asian values that impact health orientations, the desire for personal and familial self-sufficiency is strong, and there exists a substantial fear or shame associated with dependency, particularly dependency on non-family agents (Shon and Ja, 1982). A related value is the emphasis on personal, interpersonal, and environmental harmony. In traditional Asian households children and youth are socialized to be in control of one's feelings, needs, and impulses such that this harmony is not disrupted. From this perspective the concepts of physical and emotional health are inseparable and tied to one another as is the general relationship of the individual to the social and physical environment (Tung, 1980). This more holistic orientation suggests that health prevention concepts stressing balance and the avoidance of excess behaviors may be quite effective in many Asian communities. However, those interventions that emphasize the service (and dependency oriented) nature of the program may be less impactful.

Protective Factors

Family Support

The role of the family in health maintenance is an important issue to consider in Asian/Pacific communities. The most newly arrived Asian immigrants and their families must adapt to the effects of urbanization, role changes in the family, cultural conflicts, and acculturation pressures (Hoang & Erickson, 1985). Within this context, strong kinship and family ties are not only culturally consonant, but they provide the economic and social support needed for adjusting to a new culture. Males tend to serve as the heads of the household, and age, experience and seniority are respected (Shon & Ja, 1982). The importance of family support in Asian communities is evident from the history of health and mental health interventions that have targeted these communities. Those programs that have promoted family decision-making have tended to be more successful. Similarly, health education campaigns that have emphasized the network of supportive family relationships have proven to be especially effective for immigrant groups (Zane et al., 1987).

Community Networks

In addition to family influences, community networks have a powerful influence in facilitating or impeding the diffusion of health information and associated behavior change (Weaver, 1976). Subgroup communities or ethnic enclaves are frequently self-contained as Chinatowns and Koreatowns with residents being predominantly immigrants and elderly (Gould-Martin & Ngin, 1981). The ethnic communities are densely populated areas of commercial enterprises including restaurants, gift shops, groceries, small businesses, and ethnic newspapers, as well as family associations, community service agencies, and multiple residential housing. Since residents of these communities generally do not travel beyond community boundaries for services and because they often encounter cultural and language barriers when they do, these communities tend to be quite cohesive and provide individuals with familiar, stable, supportive environment. However, at times this support network can work against individuals seeking health services. This frequently occurs when the person must seek help for a highly stigmatized disorder (e.g., AIDS, mental health problem).

Most of the research on risk and protective factors are based on Asian American adults. While it can be argued that adolescents are likely to be more acculturated than their parents, to be exposed to peer groups in schools, and to have some different kinds of experiences from their parents, they undoubtedly share some of the same diets, cultural stressors, and attitudes with their parents, as well as the family and community protective factors.

NEEDS OF SPECIFIC ASIAN GROUPS

Little in the way of empirical research can be found on the incidence and prevalence of health/mental health problems of various Asian American groups; data on adolescents are virtually nonexistent. Research suggests that Asian Americans have a high prevalence of Hepatitis B, which can lead to liver cancer (Ng, 1989). In terms of other disorders, not much is known. Available statistics on mortality rates for 1980 reveal some interesting findings (see Yu, 1987). The age-adjusted mortality rates per 1,000 population in the U.S. is 3.5 for Chinese, 2.9 for Japanese, 5.6 for Whites, 5.8 for American Indians and Alaskan Natives, and 8.3 for Blacks. Thus, two Asian American groups show relatively low mortality rates. Death rates are high for ages 0-5 years, and drop to a minimum for ages 5-14; after age 14, the rates increase with age for the entire population. In every age group, Asian Americans have lower rates than those for Whites.

Yu also examined the leading causes of death. Heart disease, cancer, cerebrovascular disease, and accidents were the first four leading causes for Chinese, Japanese, Filipinos, and Whites. The fifth cause of death was pneumonia and influenza (Chinese, Japanese, and Filipinos) and chronic obstructive pulmonary disease (Whites). While previous studies of the general population reveal that social class and mortality are negatively related, no analysis of this relationship has been performed for Asian Americans. Yu did find that the mortality rate for foreign-born was much higher than for native-born Asian Americans in all age ranges. It is not clear why nativity is related to mortality. Factors such as the premigration health of immigrants or differences between foreign- and native-born Asian Americans in socioeconomic levels, adjustment, resources available, cultural practices, diets, etc., may be operating. One major study (Zane et al., 1988) on the health and mental health needs of various Asian American groups was conducted in Los Angeles. The investigators of the study conducted interviews and forums with leaders and service agency personnel from the Cambodian, Chinese, Japanese, Korean, Lao, Pilipino, Samoan, Thai, Tongan, and Vietnamese communities. Although the study provides little in the way of empirical data and statistics, the findings are, nevertheless, informative and important. The following sections highlight some of the findings from Zane et al. (1988) for the different groups. While similar problems may affect different groups, our intent is simply to present some of the most salient findings.

Cambodians

The discrepancy in living conditions between Cambodia and the United States has led to numerous health problems for those now residing in the U.S. Despite the fact that many Cambodians are accustomed to crowded housing conditions, in their native country the dwellings are constructed so as to accommodate a large number of people. Air could circulate freely such that feelings of overcrowdedness were minimized. However, in the U.S., the one or two room urban dwelling is not well-suited for 8-10 inhabitants. Many Cambodian Americans complained about their dwellings in the U.S., in terms of overcrowdedness and poor sanitary conditions which cultivated disease. Some were simply confused over heating and plumbing systems. A recent study on the Southeast Asian population in California found that Cambodians are in great need for mental health services (Gong-guy, 1987). Cambodians are 3 1/2 times more likely than the general population to need inpatient or outpatient mental health care. Many Cambodians have also suffered great physical and psychological trauma that places them at greater risk for developing health and mental health problems. For example, the California study found that close to two-thirds of the Cambodians have suffered the death of a close family member. Moreover, close to one-fourth (21.7%) of the Cambodian women have suffered the death of their husbands.

Chinese

Affordable health services continue to be a high priority in the Chinese community. Many Chinese do not have health insurance plans in their employment contracts. Immigrant youth would benefit greatly from health education programs which promote disease prevention (e.g. tuberculosis, AIDS) and better nutrition practices. Accessible, community-based health care clinics staffed by bilingual personnel can provide systematic health screening services (e.g. blood pressure exams) to reinforce a more preventive orientation towards health care. All community groups would benefit from more mental health outreach programs which would help reduce the shame and stigma of using mental health services. Professionally staffed mental health programs are needed because many times the counseling services provided by cultural adjustment and family service programs are not equipped to handle severe psychological problems and family crises. A significant number of Chinese patients require psychotropic medications. Their treatment requires particularly careful monitoring in view of the accumulating evidence that Chinese require lower dosages than Caucasians for clinical improvement, and toxic side effects may occur more frequently for Chinese.

Filipinos

Critical health issues include substance abuse by youth and teen-age pregnancy. Mental health services are needed to address problems concerning domestic violence, battered women, child abuse, cultural adjustment, ethnic identity conflicts, and developmental disability. Increased family tension may result from living in small, crowded conditions, especially in the inner-city areas.

Japanese

Serious health issues such as venereal disease, AIDS, alcoholism, and drug abuse have not received adequate attention within the Japanese community. Increased community education and outreach efforts are required to encourage preventive health care practices and facilitate appropriate referrals when these health problems do occur. A bilingual health education information center is needed to inform the community about health services which are available. A common misperception exists that Japanese Americans do not need mental health services because they are more acculturated and have less mental health problems. Contrary to this belief, mental health services remain a high priority. Japanese youth can develop drug abuse, identity, or intergenerational problems. Moreover, a strong stigma still persists within the Japanese community over mental health disorders and the use of psychological help. More community education and outreach efforts are necessary for encouraging Japanese to make better and more frequent use of mental health services.

Koreans

Health and mental health services are also seen as an important priority in the Korean community. New immigrants are particularly in need of these services. It appears that family counseling services would be especially beneficial for one youth subgroup of the community, adopted Korean children. Many of the adopted children are now adolescents, many of whom are experiencing ethnic identity difficulties.

Lao

The Lao community has certain health and mental health needs specific to their war experiences and forced relocation. The health conditions in the refugee camps in Thailand varied widely. Therefore, despite the requirement of a medical check-up in the refugee camps, thorough medical examination follow-up examinations are still needed upon arrival in the United States. Lao refugees are also experiencing mental distress from their wartime traumas. For example, the Lao in California are 3 1/2 times more likely than the general population to require inpatient or outpatient mental health services (Gong-guy, 1987). Also, 13.4% of the Lao have experienced the loss of a close family member. In order for Lao to utilize services, they need to be educated about American health and mental health systems. The use of mental health services is a foreign idea often associated with stigma. Outreach to the Lao is a much needed service.

Thai

The existing health care facilities wherein high concentrations of Thai have settled is unable to respond in a professional, sensitive, and bicultural/bilingual manner to the needs of the Thai community. At a minimum, Thai communities are in need of basic information and referral about health services. Translation and advocacy assistance were also indicated as needs within the area of health services. The need for information, referral, and treatment of alcohol and substance abuse is another issue affecting health care services. In terms of service delivery, various health care resources need to be centralized at a single site. This holistic approach to the individual would focus on the integration of the individual's needs in a variety of services. Mental health and physical health, as dichotomized by western health and mental health care professionals and service systems, is a distinction that is foreign to the Thai communities. Health includes mental health as an intrinsic element of the health service needs of Thai communities.

Tongans

There is a great need for better access to health care services. Existing health care facilities where high concentrations of Tongans live do not have bilingual/bicultural assistance available for Tongan communities. This lack of access prohibits appropriate utilization of services by Tongan communities. Most people in Tongan communities are self-treated. Traditional remedies and prayer are relied on as the most useful method for treating many illnesses. This treatment leads to longer periods of illness and prolonged recovery time. Community members rely upon self-treatment due to their inability to communicate with health care providers and to their restricted finances which tends to preclude the obtainment of health insurance. Without insurance, Tongans are forced to wait excessive periods of time for health care and surgery.

Vietnamese

There is a need for low-cost health care and education. Many Vietnamese are unfamiliar with health care and nutritional practices that are best for living in the United States. Certain health care practices and beliefs which were applicable in Vietnam may not be appropriate when used in the United States. Thus, the Vietnamese community would benefit from health care screening clinics and health education programs which provide outreach services. Similar to the other Southeast Asian groups, there is a great need for mental health services to help certain Vietnamese individuals and families with cultural and social adjustment difficulties as well as with emotional problems resulting from the trauma experienced during their migration. It was estimated that the Vietnamese in California are 2 times more likely than the general population to need some type of extensive mental health treatment (i.e. either inpatient or outpatient services). The study also estimates that close to two-thirds (64.3%) of the Vietnamese community need preventive consultation and educational services about mental health. Moreover, a significant number of Vietnamese (16.5%) have suffered the death of a close family member.

It should be noted that much more knowledge of the needs of different Asian groups is necessary. Nevertheless, the study by Zane et al. (1988) provides important insights into Asian group differences.

Mental Health Status

For the past three decades, Asian Americans have suffered from a pervasive stereotype concerning their extraordinary adjustment. Statistics on low divorce, crime,

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and juvenile delinquency rates coupled with high educational attainments and family incomes have obscured the within group differences among Asians, the misleading nature of some of the statistics, and the mental health problems encountered by these groups (Sue & Morishima, 1982). Increasingly, there is recognition that Asian American youths are encountering problems such as juvenile delinquency, gang activities, and AIDS.

Serious mental health research on Asian Americans began less than two decades ago. There was increasing recognition by some investigators that Asian Americans experienced significant mental health problems but that these problems were not widely recognized by researchers, service providers, and policy makers (Kitano, 1969). It was not until the mid-1970s that mental health administrators began to design programs for Asian Americans. These services arose because of the increasing demands by Asian communities for assistance in addressing their mental health needs. The design of these services was largely based on the experience of community workers, not on research since there was a paucity of empirical studies on mental health and treatment (i.e., psychotherapy and psychopharmacology) issues associated with this population. Even now, not much mental health research has been devoted to Asian Americans (Leong, 1986). For example, although major epidemiological studies of the prevalence of mental disorders have been conducted for ethnic minority groups such as Blacks and Hispanics, none can be found for Asian Americans (Sue and Morishima, 1982). Valid measures of disturbance for various Asian groups have not been established, and the effectiveness of treatment has not been evaluated for the various Asian groups. Research has consistently demonstrated that Asian Americans tend to underutilize Western mental health services and, once in treatment, to show high levels of disturbance and to

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prematurely terminate therapy (Brown, Huang, Harris, & Stein, 1973; Kitano, 1969; Los Angeles County Department of Mental Health, 1984; Miranda & Kitano, 1976; Shu, 1976; Sue & McKinney, 1975; Sue & Sue, 1971; 1974). This pattern of utilization cannot be attributed to the possibility that Asian Americans experience lower levels of psychopathology or have adequate alternative forms of help. The few available surveys of mental health needs reveal that Asian Americans have high mental health needs (Kim, 1978; Peralta & Horikawa, 1978; Prizzia & Villanueva-King, 1977). Studies of college students have also suggested that major adjustment problems are experienced by Asian Americans (Leong, 1986; Sata, 1983), and certain groups such as Southeast Asian refugees and immigrants have extremely high levels of depression and other disorders (Liu & Cheung, 1985; Owan, 1985). Concern has been expressed over the levels of mental health disturbances and the lack of adequate mental health assistance among Asian Americans (Asian American Subpanel to the President's Commission on Mental Health, 1978).

THE DELIVERY AND UTILIZATION OF SERVICES

In a review data collected by the National Center for Health Statistics concerning visits to physicians by Asian Americans, Yu and Cypress (1987) noted that for Asian Americans and Whites, more females (60%) than males (40%) visited physicians. Interestingly, age differences were found for visits to physicians. Among those Asian Americans who saw physicians, fully 30% were children under 15 years of age. For Whites, children in this age range accounted for only 18% of visits to physicians. Since the Asian American population is somewhat younger than that of White Americans, one might expect to see a higher percentage of the Asian American, rather than White American, population of children accounting for visits to physicians. Another possible factor is that Asian American parents may be more concerned about their children's health. The 45 years and over age group of Asian Americans comprised only 29% of those who visited physicians, compared to the 41% figure for Whites. While this pattern may be explained by the relative younger age of Asian Americans compared to Whites, it is unclear if the pattern is attributable to certain factors, such as an avoidance of physicians, use of alternative medical services, or ethnic differences in the health status of those 45 years and over.

Yu and Cypress also examined the types of providers and services sought. Asian Americans were more likely than Whites to use pediatricians, and less likely to see surgeons or psychiatrists. In terms of services, they made more physician visits for problems involving the skin and for special conditions and examinations without sickness (including general medical examinations, routine normal pregnancy examinations, and well-baby examinations). Asian Americans were less likely than Whites to have problems with accidents, poisoning, and violence.

Again, most of the findings do not specifically provide insight into the utilization of physicians among adolescents (ages 10-18 years). They do suggest that in the Asian American population, users tend to be relatively young.

Mental Health

Mental health investigators have examined in greater detail the utilization of mental health services among Asian Americans and the cultural factors that affect utilization and treatment outcomes. In general, (1) few Asian Americans use services, (2) Asian American clients tend to be more disturbed than nonAsian American clients, and (3) a high proportion of Asian American clients prematurely terminate treatment. It appears that Asian Americans avoid services until the emotional difficulties are very severe. Then, many prematurely terminate because they find the services ineffective or culturally incongruent (Sue & Morishima, 1982). The particular factors include the following:

Values. The high rate of premature termination among Asian American clients has been attributed to the clash of Asian cultural values and those of Western values (Shon & Ja, 1982; Lee, 1980). Many Asian Americans, particularly those who are less acculturated to this society, are unfamiliar with or have little faith in Western forms of psychotherapy (Sue & Sue, 1971). One promising area is the emphasis placed on family values in Asian American culture. The manner by which therapists address the extended family unit, gain family involvement, and strengthen familial ties, may be crucial in treatment (Murase, 1977).

Communication style. In Western psychotherapy there is a reliance on verbal expressiveness, open self-disclosure, and in-depth examination of emotional conflicts to resolve psychological problems. These aspects can conflict with the tendency on the part of Asians to be less verbal and to refrain from the public expression of feelings (Kim, 1973). As Chang (1985) has noted, the "language of emotion" for Asians is somewhat different in that affection is conveyed by the use of gestures, often involving the exchange of material goods and services for each person's physical well-being. Also, metaphors are frequently used to communicate feelings. Somatic terms are invoked to communicate affective states. This difference in communication style can help explain the somatization tendencies exhibited by Asian clients, particularly ones with depressive disorders (Kleinman, 1977; Marsella, Kinzie, & Gordon, 1973). Indeed, evidence is accumulating which suggests that somatization tendencies among Asians do not reflect a denial of emotions or a lack of psychological sophistication but involve different display

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rules for problem expression as perceived by the Asian clients seeking treatment (Cheung, 1982; Cheung & Lau, 1982; Cheung, Lau, & Waldmann,1981).

Problem-solving preference. Some of the earlier studies consistently documented that compared to Whites, Asians preferred structured, unambiguous tasks and sought immediate, pragmatic solutions to problems (Arkoff, 1959; Meredith, 1966). Given that traditional insight-oriented psychotherapies often use an ambiguous, open-ended problem-solving process, Asian clients may perceive such therapies as inefficient and not relevant to their immediate concerns. Consistent with this difference, Johnson and Murase (1974) have observed that Eastern psychotherapies tend to center on social and objective rehabilitation (e.g. better work productivity), while Western therapies tend to emphasize personal and subjective restoration.

Treatment expectations. Once in therapy, Asians tend to consider the therapist as an authority who will provide direct advice and information (Arkoff, Thaver, & Elkind, 1966; Yuen & Tinsley, 1981). There is also a strong emphasis on adhering to specific prescribed, hierarchical roles within any formal relationship as opposed to the more egalitarian, person-oriented relations found in Western cultures (Lee, 1982). Thus, the poor response of Asian clients may occur from a disconfirmation of role and help expectations. Asians and Whites also differ in their conceptions of mental health and disturbance. Asians are more likely than Whites to believe that mental health is caused by the avoidance of morbid thinking and that mental disturbance is influenced by organic or somatic factors (Sue, Wagner, Ja, Margullis, & Lew, 1976). If the practice of psychotherapy requires clients to focus on painful or negative (i.e., "morbid") thoughts and de-emphasizes somatic interventions, many Asian American clients may find the process of psychotherapy to be inconsistent with their beliefs.

In summary, users of physicians among the Asian American population tend to be young and female. Mental health services are avoided, and cultural factors seem important in explaining the underutilization of mental health services, premature termination of the services, and inability to achieve positive outcomes from treatment. Cultural factors have influenced the pattern of utilization of mental health services.

There is reason to believe that barriers exist in the delivery of services to Asian Americans. In a survey of different Asian American groups, Kim (1978) asked respondents to rate the most important characteristics of different service agencies from a list that included the availability of bilingual staff, helpfulness of staff, convenient access to agencies, confidentiality, and service fees. Respondents reported that the most important characteristics were availability of bilingual staff and the helpfulness of the staff. Confidentiality, access, and fees were not considered important, relative to bilingual and helpful staff. Because of the immigrant nature of the Asian American population, many Asian Americans have limited English proficiency which creates problems in knowing sources of assistance, services that are available, and procedures and practices in service agencies (Kim, 1978). This creates anxiety and feelings of helplessness. Furthermore, immigrants are accustomed to services that are provided in a personal manner. For example, the doctor-patient relationship is quite personal and informal in Asian countries. Health care providers in Asia often function as friends, advisors, and advocates for their clients, so that the formality and regulations associated with health services in the United States create problems.

As mentioned throughout this paper, the research on Asian American adolescents is sparce. Our assumption, which we believe is reasonable, is that the research findings gathered on adults is pertinent to adolescents. Adolescents are likely to share with their parents cultural attitudes concerning health and use of services and experiences with cultural conflicts and social supports. Furthermore, research on the attitudes, behaviors, and experiences of adults is important since parents help to determine the nutritional intake, health habits, place of residence, social patterns, type of care sought, etc., of adolescents. However, there are important differences to consider. Asian American adolescents, particularly if they are second generation, are more acculturated than their parents, are exposed to nonAsian peers in school, face psychological problems such as self-identity, and are likely to have higher health standards and practices than found in Asian countries. Moreover, intergenerational conflicts (e.g., between adolescents and their parents or other extended family members) are often exacerbated by acculturation differences. The adolescents may desire, to the consternation of parents, greater independence to pursue their interests and mainstream American practices, such as diets (e.g., "fast foods") and medical services (e.g., opposing use of folk healing services advocated by parents).

IMPLICATIONS AND RECOMMENDATIONS FOR ADOLESCENT HEALTH SERVICES

Based on this review of health problems and services for Asian Pacific youth, the following implications can be drawn to facilitate the development of more culturally-responsive health care for this underserved population.

Types of Services Needed

Affordable health services continue to be a high priority for Asian Pacific communities. Research has consistently found that recent immigrants, particularly Southeast Asian refugees, are at high risk for the development of health and mental health problems (Sutherland, Avant, Franz, Monzon, & Stark, 1983; Van Deusen, 1982). Many Asian Pacific families and individuals would benefit greatly from health education programs which promote disease prevention (e.g. tuberculosis, AIDS) and better nutrition practices. Accessible, community-based health care clinics staffed by bilingual personnel can provide systematic health screening services (e.g. blood pressure exams) to reinforce a more preventive orientation towards health care.

With the increasing conflict between Asian Pacific parents and youth over such issues as interracial marriage, drug use, discipline, truancy, and familial obligations, family adjustment and counseling services are needed to help families resolve these intergenerational crises. There is an increasing need for family counseling with Asian Pacifics involved in interracial or intercultural marriages. Counseling would be especially beneficial for couples attempting to cope with problems arising from differences in communication style, cultural values, and role relationships. All community groups would benefit from more mental health outreach programs which would help reduce the shame and stigma of using mental health services. Kim (1985) has noted that family intervention can be an effective intervention tool with Asian Americans, provided that the intervention is culturally matched to the clients.

Professionally staffed mental health programs are needed because many times the counseling services provided by cultural adjustment and family service programs are not equipped to handle severe psychological problems and family crises. A significant number of Asian Pacific patients require psychotropic medications. Their treatment requires particularly careful monitoring in view of the accumulating evidence that Asians require lower dosages than Caucasians for clinical improvement (Lin & Finder, 1983), and toxic side effects may occur more frequently for this population (Lin, Poland, & Lesser, 1986).

Mechanisms for Service Delivery

Organization of Services

A multi-purpose, multi-service center which provides both health and mental health care has proven to be the most effective and culturally acceptable means of delivering these services to Asian Pacific communities. Multi-service centers succeed for several reasons (Sue and Morishima, 1982). First, many Asian Pacific individuals do not make strong distinctions between health and mental health problems. The multi-service approach is congruent with the manner in which they conceptualize their health and emotional difficulties. Second, often shame and loss of face are experienced when an Asian Pacific person must seek mental health or health services. This negative process can be minimized by having the person only apply for services once at the one-stop multi-service agency. Finally, the multipurpose center is simply more convenient for Asian Pacific families because various members of the family can be served at one site.

Recognition of the cohesive family unit as an important resource and support for Asian often generates recommendations to use family-based services and treatment approaches. However, for Asian adolescents at-risk, a major problem may involve estranged family relations in which the family may be perceived more as a stressor than a resource by Asian youth. The inclusion of family members must be considered carefully, and in many cases, Asian adolescents may be more health care seeking without the involvement of family members.

Aggressive Prevention and Outreach Program

Aggressive prevention efforts are required especially in the area of mental health. Many Asian Pacifics still do not understand mental health problems and delay seeking psychological help until the disorder has become severe and unmanageable. They also are not knowledgeable about the value and function of mental health treatment (Kim, 1978). Because health services are more acceptable and familiar to Asian Pacific clients, health services can be used as an outreach tool for the dissemination of mental health information. For example, mental health education can be presented at health fairs as people are completing blood pressure and other health screening exams. Videotapes of health education programs could be made in different Asian languages and shown to various community groups. Educational messages should focus on specific health problems or psychological disorders such as depression and demonstrate the effect of these problems on daily functioning (e.g. impairs performance at work or school). Part of this prevention effort would involve consultation by center staff to other human service agency personnel on the identification of emotional problems in Asian Pacific persons and the process of making a successful mental health referral which can circumvent the inherent issues of loss of face and stigma.

Care should be taken to tailor the outreach to specific Asian Pacific communities, accommodating important cultural differences. For example, outreach efforts by means of the television may be especially effective in the Chinese community but not in other Asian Pacific communities. The use of community terminology to describe services and health problems is important. For example, labeling services as psychological or mental health may be very counterproductive because many Asian Pacifics associate psychological terms with extreme, bizarre, and "crazy" behavior. Rather, mental health problems should be defined in terms of their effects on daily functioning (e.g., problems in working with others, memory difficulties).

Linkage with School System

Integrating or linking services with the school system can greatly enhance the delivery of health and mental health services to Asian youth. Schools essentially constitute functional "catchment areas" for Asian adolescents. Linkage with schools not only brings the services to the targeted population, the efficiency of providing health services with educational ones may be especially appealing to Asian parents given the great value placed on education in Asian culture.

Support Services

Bilingual Asian Pacific health and mental health professional staff often constitute the only bilingual staff available in a certain service setting. Because they are the only bilingual staff for Asian Pacifics, they are often called upon to interpret, translate, and perform case management functions for other service providers (Lee, 1980). As a result, their clinical services are not used efficiently and these staff are at higher risk for burn-out as they attempt to satisfy the multiple demands for their time. It is important for the multi-service center to provide an adequate system of support services including bilingual personnel for interpretation and full-time case managers such that the clinical staff can focus on clinical work.

Human Resource Development Program

There is a constant shortage of bilingual-bicultural Asian Pacific service providers, particularly in the mental health and associated professions (Asian American Subpanel to the President's Commission on Mental Health, 1978). Scholarships for training such providers, as well as increased funding for careers in service delivery, are needed in order to recruit individuals to these careers. It is recommended that human resource programs for the development of bilingual Asian Pacific professionals be established to address this personnel shortage. In this program a community organizer would coordinate and monitor the professional and paraprofessional manpower resources available in various Asian Pacific communities. Another possible function of the resource program would be to develop an information network which service agencies would share to aid them in preparing grants and contract proposals.

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Factors Affecting Latino Adolescent's Health and Health Care Use

Background Paper for United States Congress
Office of Technology Assessment
Adolescent Health Project

Prepared Under Contract to the Carnegie
Council on Adolescent Development

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December 1989

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December 18, 1989

Office of Technology Assessment
Adolescent Health Project
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Attention: Andrea Solarz, Ph.D.

Dear Colleagues:

I regret that I am unable to join you for today's discussions. Focusing on the concerns of minority community youth must play a central role in developing public policies and programs that improve the health and well-being of our nation's adolescent population.

The current draft "Factors Affecting Latino Adolescent's Health and Health Care Use", represents my attempt to bring together a broad base and diverse literature and recently available data on a heterogenous populations. My desire is to point out that the problems and concerns of teens, particularly among Latinos, must take into account a broader concept of health; one that goes beyond physiological and physical health and recognizes the crucial role of social and functional development in adolescent health. The major forces affecting Latino adolescent's health and well-being revolve around the factors of persistent poverty, cultural amalgamation (which is quite distinctly different for the relatively smaller immigrant segments of the population), and educational attainment.

In addition to tightening up the document's organization and prose, I intend to add several sections integrating and summarizing the material presented. A discussion about the absence of institutional responses specifically designed to meet the needs of Latino adolescents must also be added.

I look forward to receiving your comments and suggestions.

Best wishes for a festive and safe holiday season.

Yours truly,

Robert Valdez, Ph.D.
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INTRODUCTION

Recognizing the social and health program needs of adolescents and youth, especially those special needs of Latino adolescents, represents a significant development in health policy and strategy. Incorporating this group into the health policy agenda becomes increasingly important because of population dynamics that will bring forth smaller adolescent cohorts with an increasing proportion of Latinos and other minority groups represented. Given other population dynamics that suggest a larger dependent population in our society and the increasingly competitive global economy social investment in an increasingly scarce national resource-- our children and youth--must take a place in the national agenda. But social investments such as education require an extension of the youth period in the development process.

This youth period is a crucial time of biological and psychological development and a dramatic change in relations with the social environment as a child makes the transition to adulthood. During this transition the adolescent acquires attitudes and behaviors that influence his or her psychological and social integration into their family, community and society, their health and health care use, and economic productive capacity. The critical period for Latino youth occurs early in adolescence during the junior high school years. This is the time that significant numbers of Latino youth not only drop out of school but also experience substantial delays in school (Hirao-Nakanishi, 1986).

Adolescence usually refers to the biological process during which the individual develops a mature personality, a sense of identity, the capacity for sophisticated abstraction, and adapts to their family and community. Youth, however, is a sociological period that overlaps with post-pubertal adolescence that society requires the individual to pass through in order to gain full rights and responsibilities. The chronological limits of youth are defined by cultural and socioeconomic factors rather than biologic. The most important of these factors are the timing and duration of formal education and prospects for successful labor force participation.

In our society, we assume it takes about 20 years to mature to adulthood. But we must not forget that socioeconomic and cultural conditions often reduce this period to the detriment of the individual's potential development. Poverty, as an economic and social factor, often negates the personal efforts of adolescents because it shortens the time available for studies and limits the scope of formative experiences. The role of poverty in stunting the development of Latino children and adolescents must take center stage in discussing public policy strategies for improving health and social well-being.

Health in adolescence is strongly determined by experience in prior stages of development. Furthermore, the maturation process that youth experience influences the new diseases they contract. The problems they are unable to overcome may have future health consequences for themselves and for their offspring. Latino youth experience a maturation process that includes stresses induced by immigration or "acculturation" stresses, economic stresses, and cultural change in response to economic stress.

As we will see Latino youth are a heterogeneous group when one focuses on physiologic and psychologic function. Social disparities both between and within national origin groups exist which result in potentially important variations in epidemiologic profile and health service use. Among the most important factors impeding the care for Latino adolescents is that they are more likely to be uninsured than any other population.

Mortality rates by cause vividly demonstrate that both a medical and public health perspective are required in the care of Latino adolescents. Leading causes of death in Latin America and North America are quite similar. Accidents are the leading cause of death for both males and females, with young males more likely to have accidents of all types. The second leading cause of death is homicide. Other major cause of death include heart disease, malignant tumors, influenza and pneumonia, enteritis, and tuberculosis. Suicides are often mentioned as major causes of death among non-Latino youth so it is worth mentioning that some drug related mortality and motor accidents may be hidden suicides. The act of suicide is both a religious and cultural taboo.

Four major characteristics significantly affect the health and health service utilization of Latino adolescents: (1) sociodemographic factors, (2) prior health and nutritional status, (3) environmental and occupational exposures, (4) stress and coping mechanisms. This paper examines what is known about each of these characteristics by discussing the demographic profile of the Latino population and adolescents in particular, describing the data available on the health status and utilization of services, and highlighting the sociocultural factors that influence the decision to seek and use medical care.

LATINO COMMUNITIES OF THE UNITED STATES

The purpose of this section is to review some characteristics of the Latino population that must be taken into account in developing any illness prevention and health promotion program. This section provides a brief sketch of the Latino communities of the United States and compares only the most salient characteristics for each.

The Latino population is characterized by three major factors. First, it is a population experiencing rapid population growth. In 1987, the Latino population accounted for 8.1 percent of the total population compared to 6.4 percent in 1980; a 34 percent increase in the total size of the population in just seven years. Second, it is highly concentrated in various specific regions in the country, with some dispersion occurring more recently. The majority of the Latino population lives in just four states, California, Texas, New York, and Florida. Third, it is an extremely diverse population. This diversity is reflected demographically, socially, and economically.

Rapid population growth comes about as a result of two phenomena, a large contribution due to natural increase (i.e., the difference between births and deaths) and increasing numbers of immigrants (McCarthy and Valdez, 1985). About half of the increase in the size of the population is accounted for by natural increase and the other half by immigration. Chart 1 provides provisional estimates from the Census bureau on the size of the Latino populations in 1987 and enumeration counts for 1980.

Table 1

UNITED STATES LATINO POPULATIONS HAVE GROWN RAPIDLY

Populations	1987		1980	
	Number (Millions)	Percent	Number (Millions)	Percent
Mexican	12.1	65	8.7	60
Puerto Rican#	2.5	13	2.0	14
Cuban	1.0	5	0.8	6
Central/South	2.2	11	1.1	7
Other	1.6	14	2.0	9
Total	19.4	100	14.6	100

These estimates exclude Hispanics living outside the United States, including territories and the Commonwealth of Puerto Rico. An additional 3.2 to 3.5 million people live on the island of Puerto Rico.

In 1987, the Census Bureau estimated that there were about 19.4 million Hispanics living on the United States mainland. An additional 3.2 to 3.5 million people live in the Commonwealth of Puerto Rico. Commonly, government estimates exclude Latinos living outside the 50 states and the District of Columbia. Chart 1 presents estimates for the various major ethnic groups that make up the Latino population. The Mexican heritage population comprises 65 percent of the total Hispanic population; Mainland Puerto Ricans account for about 13 percent; the Cuban population makes up about 5 percent; and Central and South Americans combined account for 11 percent; and the Other category accounts for about 9 percent.

The Central and South American group is composed of peoples predominately from the Dominican Republic, El Salvador, Guatemala, Nicaraqua, Panama, Honduras, Costa Rica, Columbia, Ecuador, Peru, Argentina, Chile, Venezuela, and Bolivia. About 40 percent of the Central American population resided in New York State in 1980 reflecting the fact that Dominicans represent roughly one third of the total Central American population and that 80 percent of Dominicans live in New York. A third of the Cental American population live in California composed primarily of Costa Ricans, Salvadorans, Guatemalans and Nicaraguans and the remainer are distributed between Florida (6 percent) and other states and the District of Columbia. Nearly a third of all South Americans resided in New York in 1980, with Colombians, Ecuadorans, Peruvians and Argentinians dominating. About 20 percent of South Americans lived in California with Peruvians, Argentinians, Bolivians and Chileans representing the largest country of origin groups. Venezuelans tend to concentrate in Florida.

The group indentified as "Other" include the Hispano population of the Southwest, who trace their ancestry back to Spanish and Mexican/Indian stock and who do not identify themselves of Mexican origin as well as individuals of Spanish heritage with no Latin American connection and a residual group of mixed and part Latinos (e.g., offspring from Hispanic and non-Hispanic parents and offspring from marriages from members of different Hispanic ethnic populations).

LATINOS ARE REGIONALLY CONCENTRATED

About 60 percent of Latinos live in the five Southwestern states, with 34 percent residing in California and 21 percent calling Texas home. The Northeast is home to about 14 percent of the Latino population with the New York City - New Jersey area accounting for about 11 percent of the total.

About ninety percent of the entire Latino population live in just nine states. In fact, this regional concentration is even more focused with most Latinos living within major metropolitan areas in these states. Most Latinos reside within the central cities in metropolitan areas although not to as great a degree as among blacks. In comparison, only 73 percent of the non-Latino white population resides in metropolitan areas. Therefore, in considering the development of prevention programs and services specifically targeted for Latinos one must recognize the largely urban and suburban environment in which most Latinos work and reside. The special needs of rural Latinos, however, must not be forgotten given the known risks of migrant and rural life.

Table 2

LATINOS ARE REGIONALLY CONCENTRATED

Region	Percent of Latino Population
Southwest	60
Northeast	14
Florida	6
Illinois	4

Source: 1980 Census

Table 3

LATINOS ARE HIGHLY CONCENTRATED IN METROPOLITAN AREAS

Ethnicity	Percent Residing Within Metropolitan Area
Non-Latino white	73
Latino	
Mexican	81
Puerto Rican	96
Cuban	94
Central/South American	96
Other	78

More than 50 percent of the total Latino population lives in the following ten metropolitan areas: Los Angeles-Long Beach; New York City-New Jersey; Miami; Chicago; San Antonio; Houston; San Francisco-San Jose; El Paso; Riverside, CA; Anaheim, CA. The Los Angeles and New York metropolitan areas rank among the largest 15 Spanish-speaking cities in the world.

Most metropolitan areas with large Latino populations are predominantly Mexican. Only New York and Miami among the ten largest metropolitan areas contain a majority of Puerto Ricans and Cubans, respectively, among their Latino populations.

LATINOS ARE A DIVERSE GROUP OF PEOPLES

Latinos in the United States are extremely diverse in the sense that many of the groups that are called Latino or Hispanic have very distinct social and political histories of settlement in the United States, relationships with other communities in their regions, and opportunities for social mobility. In addition, there are vast differences in the genetic mix among populations that include Indian, black, white, and Asian admixtures.

Demographically, the Latino ethnic groups, with the exception of the Cuban community are youthful in comparison to the non-Latino white population. More than half the Mexican and Puerto Rican populations are under the age of 25. Perhaps more dramatic is the difference in the proportion who are foreign born among the different ethnic groups. The majority of Puerto Rican, Cuban, and Central and South Americans were foreign born. In fact, the Cuban and Central and South American communities are dominated by the foreign born reflecting the relatively recent migration of these groups to the United States. In 1965 Congress amended U.S. immigration laws which made immigration from other parts of the Americas easier. The foreign born account for only about a fifth to a quarter of the Mexican and Other groups reflecting the historical settlement of the Southwest and turn of the century immigration waves by these groups.

Because of its significance for economic well-being and availability of social resources an examination of the proportion of female-headed households should be of interest. Over a third of Puerto Rican and a fifth of Central and South American households are headed by women without spouses present. The Cuban, Mexican, and Other communities, however, are more similar to the non-Latino white population.

Socially, we see different patterns for key indicators that may play an important role in how groups are approached and how one communicates with members of the various communities. Latino families are generally larger than non-Latino families. Mexican families tend to be the largest in comparison to other Latino ethnic groups with slightly over 4 members per family on average, reflecting the higher fertility rate of this population.

Table 4

SELECTED DEMOGRAPHIC CHARACTERISTICS

Ethnicity	Median Age	Percent Foreign Born	Percent Female-Headed Household
Non-Latino white	38	XX	14
Latino			
Mexican	25	26	15
Puerto Rican	25	51	34
Cuban	37	77	13
Central/South	29	80	20
Other	28	17	17

The majority of the adult Latino population, those 25 years and older, have completed less than 12 years of formal education. The Mexican and Puerto Rican communities are the least likely to attain a high school education. These education levels reflect both a large number of individuals with little or no education and a severe non-completion problem. These issues raise questions about the value of printed literature for conveying health promotion and illness prevention messages. Simply printing materials in Spanish cannot overcome the difficulty in communicating health information because many individuals are illiterate in English and Spanish. For example, condom instructions cannot be understood by many Latinos because these package inserts were prepared for populations with higher levels of reading comprehension in both English and Spanish (Richwald, Schneider-Munoz, Valdez, 1989).

Monolingual Spanish-speakers account for a relatively small share of each community suggesting that even among immigrants a working knowledge of English is attained. A greater share of monolingual Spanish-speakers is found among the Cuban population, which is older and many foreign-born. Adding people who report they have limited English proficiency increases the pool of Spanish dominant people considerably. For example, 27 percent of the Mexican community and 47 percent of the Cuban population report limited or no proficiency speaking English. Among Puerto Rican. Central and South Americans, and Other Latinos we find 27, 39, and 12 percent with limited or no English proficiency, respectively.

Table 5

SELECTED SOCIAL CHARACTERISTICS

Ethnicity	Mean Family Size	Median Education*	Percent Speaks No English
Non-Latino white	3.2	12.0	XX
Latino			
Mexican	4.1	9.1	11
Puerto Rican	3.7	10.0	8
Cuban	3.4	11.7	22
Central/South	3.7	11.7	14
Other	3.6	11.8	4

* Completed schooling for adults age 25 and older.

Economically, we find the Latino ethnic groups differ occupationally reflecting in part the low end jobs in their regional economies for the Mexican and Puerto Rican communities and in part their educational and job skills among the Cuban and Central and South American community. These different work environments mean differing exposures to potential illness-causing agents. For example, many Mexicans are exposed to the hazards of modern agriculture's pesticides and herbicides whereas other Latinos are unlikely to experience such exposures.

Because Latinos are overrepresented in the lower-skill occupations relative to the non-Latino whites family incomes are considerably lower. These family resources as we saw previously supports a larger family. This fact can be seen in the percentage of Latinos who live in poverty.

A fifth of the Mexican and Central & South American community lives in poverty. Fully a third of the Puerto Rican community lives in poverty. Even among the Cuban population, which appears on other indicators better off financially experience a poverty rate that is twice that of the non-Latino white population. Despite persistent poverty Latinos generally do not rely on public assistance. With the exception of the Puerto Rican community, Latinos use public assistance at the same rate or less than the non-Latino white population.

This introduction to the Latino communities of the United States highlights their key features: rapid growth, regional concentration, and ethic diversity. This sketch illustrates the rich diversity that exists in a population that is often portrayed as a homogeneous body in the use of the term "Hispanic" by the popular press and government reports. What should be clear, particularly in considering the development of prevention programs, is that it is inappropriate to treat Latinos as a single population.

Table 6

SELECTED ECONOMIC CHARACTERISTICS

Ethnicity	Median 1979 Family Income (Thousand $)	Percent Below Federal Poverty Level	Percent Using Public Assistance Programs
Non-Latino white	21.2	6	3
Latino			
Mexican	14.5	21	9
Puerto Rican	11.2	33	24
Cuban	18.6	11	7
Central/South	14.8	20	10
Other	17.1	14	7

LATINO ADOLESCENT DEMOGRAPHICS

Before we examine the health needs of Latino adolescents we must first become familiar with the nature of this population. This section provides a brief examination of the demographic profile of Latino children and youth.

Latino youth comprise an increasing proportion of all youth in the United States. In 1988, 10 percent of the youth aged 10-19 were Latino. Projections indicate that by the year 2000, 12 to 14 percent of youth will be Latino. Mexican heritage youth account for 67 percent of Latino youth and mainland Puerto Rican youth account for another 13 percent. The proportion of Latino youth from Mexican families is likely to continue to dominate the child and adolescent population given the high fertility rate of Mexican American women.

In 1982, adolescents aged 10 to 19 accounted for 20 percent of the entire Latino population. In 1988, this group represents 18 percent of the entire population. Among the non-Hispanic population 10-19 year olds accounted for 13.9 percent of the population in 1988 and was 16.3 percent in 1982. In 1988 the under 21 Latino population made up 40 percent of the population. The median population age in 1982 was 23.9 by 1988 the median age had climbed to 25.5

Among Latino adolescents 15-19 years, 2.4% males and 14.9% of females are married and 1.5% of females were divorced. These trends are most prominant among the Mexican origin population where 3.0% of males

Table 7

NUMBER OF LATINO CHILDREN AND YOUTH
MARCH 1988

AGE	Total Population	Total Hispanic	Heritage				
			Mexican	Puerto Rican	Cuban	Central & South American	Other
Under 5	18,328	2079	1429	262	49	191	154
5-9	17,845	1982	1344	279	50	179	135
10-14	16,399	1768	1211	247	55	141	105
15-19	18,087	1690	1114	213	60	197	102
20-24	18,810	1963	1272	237	87	256	127

Source: Current Population Reports, Series P-20, No. 438, 1989
Estimates are in thousands.

Table 8

PROPORTION OF TOTAL POPULATION ACCOUNTED FOR BY LATINO CHILDREN
MARCH 1988

Age	Total Population	Hispanic	Heritage				
			Mexican	Puerto Rican	Cuban	Central/ South American	Other
Total (TH)	241,155	19,431	12,110	2,471	1,035	2,242	1,573
Under 5	7.6	10.7	11.8	10.6	4.7	8.5	9.8
5-6	3.0	4.2	4.6	4.7	2.1	3.2	3.2
7-9	4.4	6.0	6.5	6.6	2.7	4.8	5.4
10-13	5.5	7.3	8.0	7.9	4.4	5.3	5.5
14-15	2.8	3.5	3.9	3.6	2.2	2.8	2.4
16-17	3.1	3.4	3.5	3.9	2.0	3.4	2.5
18-19	3.0	3.5	3.8	3.2	2.5	3.6	2.8
20-21	2.9	3.6	3.7	3.5	3.6	4.4	2.5

Source: Current Population Reports, Series P-20, No. 438, 1989

and 17.8% females are married. (All other Latinos:1.4% males married, 9.4 % females married) Early marriages and teen pregnancy contribute to reducing the time available for formal education and vocational preparation especially among Mexican American females.

Among 18-24 year olds, 61.9 percent of Hispanic and 75.5 percent of non-Hispanic Women did not have a child in the last year. These Hispanic women have birth rates per 1000 women of 117.2 versus rates of 83.9 per 1000 for non-Hispanic women.

Only about 63 percent of 20-24 year old Latinos report graduating from high school. Considerable variation, however, was observed by heritage. Mexican Americans were the least likely to complete high school (57.6 percent) whereas other Latino are more likely to report finishing high school. Some newer immigrants have left their homeland for political rather than economic reasons. Many represent a strong middle-class with the ability to successfully compete in the labor market due to their technical and professional preparation.

Most Latino adolescents live in family settings. Most live in two parent families. Mexican Americans are more likely than other Latinos to live in two parent families. Over five percent of Latino adolescents 14-17 years old live in families in which neither parent is present reflecting the sizable number of adolescents living under the guardianship of other relatives, including older brothers and sisters. About 2 percent live in non-family households.

Table 9

PERCENT HIGH SCHOOL GRADUATES BY HERITAGE: MARCH 1988

Age	Hispanic	Mexican	Puerto Rican	All Others
15-19	18.9	17.6	19.2	22.7
20-24	63.3	57.6	61.8	79.4

Source: Current Population Reports, Series P-20, No. 438, 1989

Table 10

FAMILY RELATIONSHIP OF HISPANIC AND MEXICAN ADOLESCENTS

Family Relationship	Hispanic		Mexican	
	10-13	14-17	10-13	14-17
IN FAMILIES	99.5	97.9	99.6	98.5
with both parents	66.9	63.9	71.1	68.3
with mother only	26.9	26.5	22.0	22.3
with father only	2.4	2.3	2.8	2.6
with neither parent	3.3	5.3	3.7	5.3
NOT IN FAMILIES	0.5	2.1	0.4	1.5

Source: Current Population Reports, Series P-20, No. 438, 1989

Adolescents living with neither parent and those living in non-family households often are part of the immigrant Latino adolescent population. In recent decades, the adolescent population of Latin America has increased considerably relative to other age groups and in absolute numbers. Adolescents account for over 25 percent of the total population of Latin America and are among the most likely to begin internal migration to urban areas and international immigration.

THE HISPANIC HEALTH AND NUTRITION EXAMINATION FINDINGS: A SUMMARY

The most recent source of data on Latino health and health needs comes from the Hispanic Health and Nutrition Examination Survey (HHANES). The HHANES was a special population health survey conducted by the National Center for Health Statistics. It was the first large scale health survey conducted to assess the health care needs of Mexican Americans, mainland Puerto Ricans, and Cuban Americans. The surveys were regional surveys in the areas of greatest concentration of these populations. The Mexican American sample was drawn from the five southwestern states: California, Arizona, Colorado, New Mexico, and Texas. The mainland Puerto Rican sample was selected from the New York City - New Jersey area and the Cuban American sample was drawn from Dade County, Florida. This section summarizes findings for the Mexican American child and adolescent sample.

Using data from the Hispanic Health and Nutrition Examination survey on targeted medical conditions of Mexican American children 5 to 11 years 40 percent of all active conditions were developmental and behavioral conditions. These conditions had lower levels of treatment than physical disease conditions. Data on targeted medical conditions collected for adolescents 12 to 18 years were less informative because data were collected on conditions associated with diseases of older age groups. The prevalence of chronic medical conditions among Mexican American adolescents was 4.8 percent. The most common conditions

Table 11

ACTIVE MEDICAL CONDITIONS AND TREATMENT AMONG MEXICAN AMERICAN CHILDREN 5-11 YEARS

Condition	Prevalence	Percent Active	Percent Treated	Percent Inactive	Percent Treated
Anemia	7.9	13	92	87	93
Urinary Infect	6.0	22	89	78	98
Asthma	4.9	63	100	27	93
Speech Problem	4.2	84	46	16	40
Lung Disease	3.8	22	100	78	98
Heart Disease	3.6	52	91	48	90
Convulsions	3.4	19	88	81	98
Psychologic	1.5	86	37	14	66
Poisoning	1.2	0	0	100	100
Coordination	1.2	89	69	11	100
Eczema	0.9	93	92	7	0
Mental Retardation	0.5	100	100	0	0
Rhuematic Fever	0.4	0	0	100	100

Source: Mendoza, 1989

reported were chronic bronchitis (4.5%), heart murmurs (3.4%), kidney problems (4.1%), hepatitis and jaundice (3.1%), and eye problems (4.7%). Developmental-behavioral conditions such as sexually transmitted diseases, adolescent pregnancy, and depression were not assessed.

Another assessment of health status available in the HHANES was the perceived health status of the child determined by various raters. The raters were the survey physicians, the child or adolescent's mother, and the children and adolescents themselves. Clear differences in perceived health were demonstrated across the various raters. Physicians perceived only 1 to 2 percent of children and adolescents to be in poor

Table 12

SEVERITY OF MEDICAL CONDITIONS FOUND IN NHANES II
CHILDREN AND ADOLESCENTS, AGED 6-18

	Mexican		Anglo	
Severity	6-11	12-18	6-11	12-18
Healthy	60	62	67	60
Moderatly ill	39	32	31	36
Severe	1	7	2	4

Source: Mendoza, 1989

health, but Mexican-American mothers and their offspring report significantly higher percentages, Table XXX. The perception of the child's health held by the mother and the offspring is worse than that reported by other families in similar surveys. This suggests that the current measures of health status are not capturing health issues important to Mexican Americans.

These perceptions of health status are affected by poverty and language preference. For physicians, it was the presence of a chronic medical condition that influenced perceived health ratings whereas for mothers and offspring poverty status and language usage. Spanish speakers were more likely to give a poor health rating than English or bilingual respondents.

Dental examination data demonstrate that among Mexican American children total dental needs for primary teeth are similar to the general population but signs of greater severity of problems is suggested. The

Table 13

PERCENTAGE OF MEXICAN AMERICAN CHILDREN AND ADOLESCENTS RATED IN POOR HEALTH

Rater	6-11 years	12-18 years
Physican	1.2	0.7
Mother	16.9	17.9
Self	11.3	19.3

Source: Mendoza, 1989

Table 14

PERCENTAGE OF MEXICAN AMERICAN CHILDREN AND ADOLESCENTS RATED IN POOR HEALTH

Rater	6-11 years		12-18 years	
	Mother	Self	Mother	Self
Poverty				
Poor	20.0	11.2	23.4	25.6
Non-Poor	10.6	11.8	14.3	14.4
Language				
Spanish	25.5	14.3	47.1	29.3
Bilingual	13.5	15.9	17.3	24.4
English	7.5	8.2	15.1	14.1

Source: Mendoza, 1989

permanent teeth of Mexican American children show greater need for dental care and more severe dental disease with the worst disease among the adolescent. Mexican American adolescents have poorer dental health than the general population of adolescents from the same geographic region (Table 15). Over half of all Mexican American adolescents have dental care treatment needs.

Dietary frequency data suggests some nutritional concerns for Mexican American children and adolescents. Mexican Americans children had lower intakes of breads, fruits and vegetables than that recommended by the Daily Food Guide. There was adequate intakes of milk and meats food groups. Among adolescents, intakes of all food groups were low suggesting inadequate diets.

Sexual maturation of Mexican American adolecents appeared slightly delayed in these data. But this finding should be viewed cautiously because they rely on comparisons of cross-sectional with longitudinal data.

Table 15

MEAN NUMBER OF UNTREATED DECAYED PERMANENT TEETH AMONG ADOLESCENTS 12-17 YEARS

	National Institute for Research Survey		HHANES
Age	Region V	Region VII	Mexican Americans
12	.54	.39	.91
13	.47	.38	.94
14	.59	.35	.85
15	.72	.30	1.37
16	.74	.29	1.42
17	.68	.29	1.32

Source: Mendoza, 1989

Table 16

PERCENT OF MEXICAN AMERICAN CHILDREN AND ADOLESCENTS WITH BELOW RECOMMENDED FOOD GROUP INTAKES

Food Group	6-11 years	12-17 years
Milk	54	84
Meat	21	35
Bread	78	80
Fruit/ Vegetable	97	97
Vit C: Fruit/Veg.	59	69
Vit A: Fruit/Veg.	69	74

Source: Mendoza, 1989

With weight distributed normally and shorter stature, the Body Mass Index was on the average greater for Mexican American children and adolescents than for non-Latino whites. The higher prevalence of BMI scores above the 90th percentile suggests a greater prevalence of obesity or overweight. Overweight and obesity usually are thought to put adults at higher risk for a variety of conditions including, hypertension and diabetes.

Use of Health Care Services

During adolescence the child takes on more responsibility for his or her health and health care. Among adolescnts in the HHANES, 44 percent reported they had a great deal of control over their health whereas only 7 percent stated they had little or no control over their health.

Among Mexican American adolescents, 24 percent report no regular source of care and about 22 percent report either having never seen a physician or have not seen one in the past 5 years. But 76 percent report a regular health care site, mostly physician offices (67%) and community health clinics (12%). Sixty-eight percent report having had a visit to their regular provider within the last year.

Care of a preventive nature was less common. Adolescents reported that 34 percent either never had a preventive care visit, or have not had one for more than five years. Only 29 percent reported having a preventive care visit within the last year.

Among those without a regular source of care, 69 percent stated that they did not need a physician. But when asked what prevented them from seeking care the lack of money was the most common reason. These reasons, however did not appear to influence the use of alternative health systems. Only 1.3 percent of adolescents reported using a folk healer within the past year.

Hospitalization during the previous year was reported by 7 percent of adolescents, most for a single night. And only 2 percent report using a folk healer.

HEALTH STATUS AND CONDITIONS : FINDINGS FROM THE LITERATURE

A quick review of what is known about the extent of a variety of conditions will help set the stage for discussing factors that affect health and health care utilization among Latinos. One of the underlying assumptions that many comparative studies operate under is that what is Anglo (non-Latino white) is "normal" or "ideal." This orientation must be questioned in the face of serious deficiencies in most cross-cultural studies found in the literature and the recognition that on some so called objective health criterion Latinos appear to do better than expected given their socioeconomic status.

Dental Health Care

Very little is written about the dental health of Latinos. New work using the Hispanic Health and Examination Survey has helped document the level of pediatric orthodonitic disease and lack of access to dental care (Banker, 1984; Trevino, 1984). Dental care is the paradigm for lack of preventive care. It is a luxury of those with health insurance or money.

Water fluoridation would have a dramatic effect on improving the dental health of Latino children in the Southwest, where major metropolitan areas such as San Antonio, Los Angeles, San Diego remain unfluoridated. Research conducted by the National Institute for Dental Research, NIH in several Texas towns in 1985 demonstrated the benefits of water flouridation (Stiles, 1985). Life residents ages 12-14 had 45% more decay in San Antonio (DMFS 5.1) than in flouridated Port Arthur (DMFS 2.7) or Sweetwater, Texas (DMFS 2.9).

Male and female 11-19 year olds have more caries than Anglos and Anglos have twice the rate of treatment in Texas (Table X).

Cardiovascular Disease

While cardiovascular disease is a major cause of death among Hispanics the mortality rate is lower than that of non-Latino whites (Frerichs RR, 1984; Stern, 1984). The lower relative rate is unexpected when we look at the Latino socioeconomic profile, pronounced rural-to-urban migration and high prevalence of obesity and diabetes (Stern, 1985; Castro, 1985).

AIDS

The incidence of AIDS related to drug abuse is 18.6 times higher among Latinos than non-Latino whites. The incidence of heterosexually transmitted AIDS among Latinos is 15 time higher than among non-Latino whites. Twenty-five percent of all children with AIDS are Latino.

Table 17

CARIES SCORES, TREATMENT RATE & TOOTH EXTRACTION FOR TEXAS TEENS

	Hispanics		Anglos	
	Male	Female	Male	Female
Mean DMFS	3.4	4.0	2.7	3.2
% Caries Untreated	47	46	26	20
% Tooth Extraction	1.4	1.8	0.6	0.6

Source: Brown, 1988

Occupational Health

Occupation effects health through the differential social and physical exposures on the job. Latino youth's exposure to the ecology of blue collar and labor occupations introduces them to long hours of physically demanding labor, poor accommodations, stress, pesticides and other harmful chemicals, and of course, low wages.

Diabetes

Hispanics are three times as likely to suffer from diabetes as non-Latino whites (Stern, 1986). The percentage of Hispanics estimated to be diabetic is 4.5%. Socioeconomic position appears to play a large role in who gets the disease. Genetic propensity for diabetes is often suggested in the literature but this could just be an artifact or a marker for poverty and socioeconomic position.

Despite the recognition that diabetes affects Latinos disproportionately no data on insulin-dependent diabetes mellitus, also known as type I diabetes, rates among Latino children or adolescents are available. Typically this disease develops in childhood or young adulthood with peak age of onset between 10 to 14 years old.

Most diabetes affecting the Latino community is of the type II variety which most often affects adults and appears to run in families. Often people who develop the disease are overweight. Given the propensity for Latino adolescents and children to be overweight the risk of developing the disease is about 3 times higher than for non-Latino whites. It has been estimated that about 50 percent of the type II diabetes can be prevented through weight reduction and exercise.

Mental health care

Surveys including Mexican-American children and Anglo children permit a crude estimate of behavioral problems. In San Francisco mothers of 9-11 year old children were interviewed about the problems of their children (Tuddenham, Brooks, and Milkovich, 1974). Out of 100 problem items, they found only 6 differences and these were not serious. Touliatos and Lindholm (1976, 1980) conducted school surveys in Houston, Texas in which they found Anglo children were seen as having more conduct disorder, inadequacy-immaturity, and socialized delinquency whereas Mexican-American children were reported as having more personality disorder problems. Flores de Apodaca et al., 1983 found that Mexican-American children did not differ from Anglos in problem frequency. From this evidence there is no reason to suspect that

Mexican-American children have either higher or lower rate of behavior problems than Anglo children.

Examining data reported from California hospitals for treatment of mental health and substance abuse we find some indication of differential use of services by ethnicity. Anglo teens 15-19 have longer lengths of stays and blacks and Latinos have longer stays in the older categories. It may be that Anglo teens are more likely to have insurance and be institutionalized in private facilites which have longer stays, whil Latinos are more likely to be in longer stay public facilities for mental health diagnoses as adults. The age profile of the groups must be taken into account in analysing TABLE because if there is a general tendency for youths under 25 to use mental health and drug/alcohol services heavily, regardless of ethnicity, then discharge and utilization rates for Latinos will be inflated due to the fact that more than half the Latino population is under the age of 25.

Drug Use

Studying drug use in a Los Angeles barrio, Padilla et al. (1979) reported that these Mexican Americans were more likely to use inhalants, phencyclidine (PCP), and heroin compared to national drug use statistics. Another study in the same housing project found a trend toward increased use of marijuana, amphetamines, and cocaine (Perez et al., 1980)

Chavez and his colleagues studied the drug use of 7th to 12th grade students in small Southwestern towns. Comparing Latino with Anglo students they found that more Latinos reported ever using all the 15

Table 18

PSYCHIATRIC AND DRUG/ALCOHOL DISCHARGES AND AVERAGE LENGTH OF STAY BY AGE AND ETHNICITY FOR CALIFORNIA HOSPITALS (1983)

	Total Population		Non-Latino White		Latinos	
Age	No. Discharged	ALOS	No. Discharged	ALOS	No. Discharged	ALOS
< 10	863	58.2	578	55.3	110	69.9
10-14	3904	50.9	3061	52.8	308	36.7
15-19	12848	37.8	9572	40.4	1349	27.5
20-24	18007	22.7	12178	21.8	2133	22.5

Source: Stolp and Warner, 1987

substances studied (Chavez, Beauvais and Oetting, 1986). At least twice as many Latinos as Anglos reported using marijuana, "stay awake pills," downers, cocaine, hallucinogens, tranquilizers, heroin, and PCP. Among Latinos 13 percent reported inhalant use whereas 8 percent of Anglos reported using these substances.

A longitudinal study of a cohort of 1634 California students was used to compare drug use patterns and trends across ethnic groups (Huba and Bentler, 1982). The mean age of the students was 14 at the beginning of the five year study. Initially, Latino and Anglo students were more likely to use alcohol while blacks were more likel to use cigarettes. At follow-up Latinos and Anglos were more likely to use multiple illicit drugs (Maddahian, Newcomb, and Bentler, 1986). Overall, the drug use patterns of Latinos and Anglos were similar and generally different from the drug use patterns of Asians and blacks. While income was an important predictor of drug use in general, environmental variables of availability and ease of acquisition accounted for much of the differential drug use.

Perceptions on Alcohol Use

The concern with the evils of alcohol among North Americans as a source of social and health problems is not a part of the shared history with Latin America. Latinos appear to have a more liberal view of alcohol use than Anglos that does not necessarily see heavy drinking as a bad behavior that requires change. Adolescence is the critical stage during which life long behaviors are acquired such as smoking, consuming alcohol and other drugs, and developing socialization approaches. Harmful habits acquired during adolescence can largely be prevented. As we will discuss shortly, immigrant Latinos often do not acquire these risky behaviors while the native-born Latino adolescent is more likely to acquire the behaviors of the larger society.

SOCIOCULTURAL FACTORS AFFECTING LATINO ADOLESCENT HEALTH

Numerous author have reviewed what we know about the role of social, psychological, and cultural factor in illness and health service use (Akiskal, 1979; Eaton, 1981; Roberts, 1987). Similarly, recent reviews on the role of these factors in the Latino population have appeared (Cuellar, 1984; Cervantes, 1985; Vega, 1985). Little of the work in this area has focused exclusively on the adolescent but much of the allows us to infer the role of these factors on Latino adolescents.

Table 19

ARRESTS FOR ALCOHOL-RELATED OFFENSES FOR PERSONS UNDER 18 YEARS

Nature of Problem	Hispanic Number	Hispanic Percent of all Arrests	Hispanic Rate per 100,000	Non-Hispanic Number	Non-Hispanic Percent of all Arrests	Non-Hispanic Rate per 100,000
Driving under influence	2499	1	39.8	22,633	1	34.2
Liquor laws	7399	4	117.8	111,351	7	168.3
Drunkenness	178,673	5	138.0	24,964	2	37.7

Source: Caetano, 1986 derived from the FBI Crime in the United States, 1981

These factors can be grouped into three main categories: social status characteristics (i.e., age, sex, social class, marital status, ethnicity), personal resources (i.e., values, personality, coping skills, social support), and life stresses (i.e., illness, immigration, acculturation, marital difficulties, employment difficulties). What we know about the role of personal resources and life stresses among the Latino population is relatively little in comparison to the role of social status characteristics which have been the focus of most studies.

No difference in the role of the generic factors such as sex, marital status, or social class has been observed for Latinos and the non-Latino white population. For example, mental disorder rates appear higher for women, those divorced or separated, and those in the lower socioeconomic positions. A unique relationship may exist for age that suggests higher rates for older Latinos which may come about as a result of the persistent stresses of immigration, acculturation, and limited social mobility due to limited educational or vocational preparation.

The relationship between socioeconomic status and physical and pyschological disorders has been demonstrated and discussed by numerous authors (Mendoza, 1989; Eaton, 1980; Dohrenwend and Dohrenwend, 1974). The indicators of socioeconomic status most often used in health services research are education, occupation, and income. Education strongly influences future life opportunities with regard to occupation and income. Substantial benefits- economic, social, and health-related- accrue to Latino adolescents and youth for graduating from high school and college (Neidert, 1984; Borjas, 1985).

Large proportions of Latino youth never complete secondary school (Hirano-Nakanishi, 1986). Evidence (Kandel, 1986) suggests that students who during adolescence report higher levels of symptoms of anxiety and depression subsequently eperience higher rates of school dropout and also are more likely to experience employment problems as young adults. Further evidence suggests that use of hard drugs is associated with failure to complete secondary school (Newcomb and Bentler, 1986). It also appears that school performance is influenced by many of the same factors that have been identified as potential risk factors for disfunction including socioeconomic status, cultural integration, ethnic stereotypes and discrimination, child-rearing practices of the parents, family values and role obligations, coping styles, and other behavioral issues such as adolescent parenthood (Buriel, 1980, 1981, 1982; Fernandez and Velez, 1984; Fernandez, 1985)

Numerous of these potential risk factors fall into the category of personal resources. Economic stresses and modernization have exerted great pressures for change in familial and cultural patterns both in the United States and in Latin America. These pressures have had a very strong impact on the Mexican and Mexican American family. Rapid population growth due to immigration and industrialization along the border exert changes in sex roles, parental roles, and socialization practices which affect the development of children and adolescents.

Those values or prime characteristics of Mexican American families that obviously play a role in the health and health seeking behaviors of adolescents from these families include: religion, the extended family, machismo, honor, self-respect, and self-sufficiency (Wahab, 1973). Family expectations included a heirarchy of respect based upon the individual's age and sex, with older males given the most respect. Demands placed on family members were in the areas of economics, contributions, and assigned chores. Other role expections were the protection of the family image, honor, and well-being. The kind of person expected to be developed by the Mexican American family is not viewed or described as successful or educated in an academic or economic sense. The adolescent who is successful in traversing through youth possesses "urbanidad"-- such individuals have an understanding of human and interpersonal relationships.

Mexican American parents are family centered and desirous of close, warm relationships within the family. These attitudes are encourged among the children and adolescents through child rearing practices that included beliefs about: (1) parents enjoyed talking with their own parents, (2) relatives had warm and friendly feelings toward each other, (3) parent think that the child's best friend should be a brother or sister, (4) the family's neighborhood reputation was important, (5) loyalty to family was important, and (6) Mexican-American families visited their relatives more often than Anglos. Mexican American parents generally encouraged more dependence on family and obediance to authority than Anglos. Parents also disapproved more than Anglos when their child argued with authority figures or interrupted conversations.

The role of immigration and acculturation must play a central role in the discussion of health and health service use because of its implications socially, psychologically, and physically. Numerous frameworks have been outlined for understanding the concept of acculturation as it affects Latinos (Mendoza, 1981; Padilla, 1980; Szapocznik, 1980; Cuellar, 1980; Ramirez, 1983; Buriel, 1984; Cervantes, 1985). In many examinations of acculturation, language use is used as an indicator of cultural identity and a continuum is assumed that places the individual in a context of immigrant/Spanish dominant to biligual to native born/English dominant. Others have recognized the development of a bicultural context that is an amalgamation of the mainstream society's attitudes and expectations and traditional Mexican attitudes and behaviors.

The few studies that have attempted to analytically study the effects of acculturation suggest that over several generations Latinos adopt mainstream attitudes and behaviors that often increase health risks. Szapocznik and Kurtines (1980) reported that the "cultural gap" between generations increases risk of substance abuse. The less acculturated report more anxiety but that depression is not related to acculturation (Griffith, 1983; Mirowsky and Ross, 1984). Ortiz and Arce (1984) reported that bicultural Mexican Americans report less distress than either Spanish dominant or English dominant counterparts. The role of acculturation may have mental health implications but as yet the magnitude and nature of the effect remain unclear.

Mexican heritage adolescents differ in the degree of support and nature of support in times of crisis. Mexican adolescents rely on the culture component (Mexican cultural traditions, Mexican holidays, Mexican movies and poetry) whereas first-generation Mexican-Americans relied on the person (father, mother and relatives) and religion components (prayer, the parish priest, the saints, and Our Lady of Guadelupe). Second/third generation Mexican-Americans showed the least degree of reliance on the traditional Mexican values, indicating the more acculturated adolescents were making use of social support components more typical of the mainstream American culture. These findings and others suggest that a definite trend toward amalgamation of traditionalism and modernism and Latino and Anglo values are discerned across generations. Generally, this amalgamation introduces riskier behaviors into the Mexican American community and weakens the primary support system, the family.

Evidence often suggests that symptomatology often is invariant across populations, but there is some evidence to the contrary (Vernon, 1981; Roberts, 1984; Cervantes, 1985; Burnam, 1984; Vega, 1985). For example, when asked global questions about their experience of somatic complaints, persons of Mexican origin report fewer health problems than their Anglo counterparts (Roberts and Lee, 1980; National Center for Health Statistics, 1978). Trevino and Moss (1984) reported no differences between Anglos and Mexican Americans in the reported prevalence of physical health problems. But Codina and Roberts (1987) found the effect was limited to Mexican-origin groups interviewed in Spanish and only to the Mexican-born group using prevalence data. These data were the first to show a marked increase in tendency to report somatic symptoms as one moves from a context of Mexican birth/Spanish dominance to U.S. birth/English dominance. We also observed differences among mothers and adolescents using language as an indicator of cultural orientation in the Hispanic Health and Nutrition Survey data we examined suggesting that other dimensions of health and health care needs are included in defining general health.

Contrary to popular belief, the role of alternative health systems in the Mexican American community is limited. The Latino population of the Americas has participated in the Western discourse on illness and disease for almost 500 years. The major factors affecting use of services is not a substantial difference in the concept of illness and disease but rather social and economic.

Limited educational achievement and early entry into the labor force leave Latino adolescents and youth inadequately prepared to pay for the costs of medical care. Latino adolescents and youth are among the most likely group in the country to go uninsured because they are often employed in concerns that do not offer health insurance as a fringe benefit of employment or their parent's do not have coverage for them their place of employment. Among the immigrant component of the population the availability of bilingual staff and other sources of information and assistance play a vital role in learning how to use the health care system. Among the native-born component of the population the issues of institutional discrimination and prejudice affect the perceived receptivity of the health care system to serve the needs of Latinos.

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HEALTH AND RELATED SERVICES FOR NATIVE HAWAIIAN ADOLESCENTS

Background Paper for the United States Congress
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SUMMARY

There are more than 200,000 persons of Hawaiian ancestry, or Native Hawaiians, residing in the State of Hawai'i, and they comprise nearly 20 percent of the State's population. Less than 5 percent are pure Hawaiians, and probably two-thirds would identify themselves primarily as Native Hawaiians. The Native Hawaiian population is young and growing, and the Native Hawaiian adolescent population is among the largest by ethnic grouping. In 1986, 46 percent of all Native Hawaiians were 18 years of age or under; 24 percent 9 years of age or less, and 22 percent ages 10 to 18.

Among those family systems that build on strong Hawaiian traditions, common characteristics include: multiple parenting within an 'ohana (i.e., extended family) group, early indulgence followed by a shift at two to three years of age to a primarily peer-directed socialization experience, socialization toward a group/family oriented values system, and learning experiences that emphasize modeling and mutual participation rather than verbal interaction. However, extensive intermarriage with other ethnic groups (almost half of all Native Hawaiian marriages) has produced a wide variety of childrearing patterns and practices among Native Hawaiians.

Western cultural characteristics of success in many areas (e.g., education, business) are diametrically opposed to Hawaiian cultural or moral values. For example, Hawaiian values stress cooperative effort for mutual gain within a group, and not individual ambition, personal accumulation, and competition. The Native Hawaiian tradition is of "learning by doing", and socialization is peer-directed. Scholastic achievement in most educational settings is impeded when aggresiveness and individual striving are culturally unacceptable to students.

On the basis of standardized tests, Native Hawaiian students persistently perform below the statewide averages, and their performance relative to other ethnic groups worsens in the higher grades. Compared to all other State students, a much lower percent of Native Hawaiian students receive some college education (nearly 40 percent versus only 20 percent).

A greater percentage of Native Hawaiian children live in family households, compared to non-Native Hawaiian children. However, the average Native Hawaiian household is larger than the average non-Native Hawaiian household, and the average number of persons in Native Hawaiian families is greater.

Native Hawaiian mothers are younger, have higher birth rates in the lower age groups, have higher percentages of births in the higher birth orders (3+ births), and have the highest rate of illegitimate births in the State. (Native Hawaiians also had the highest infant death rate in the State, 10.2/1,000 live births, compared to an overall rate of 8.8/1,000. The Native Hawaiian infant death rate, however, was nearly equal to the U.S. rate of 10.0/1,000 live births.)

Native Hawaiians are overrepresented in the low income categories, especially in the lowest income category, and underrepresented in the higher income categories. On the basis of their proportion of the overall State population, Native Hawaiians have more child abuse and child neglect cases, and more criminal offenders, with Native Hawaiians comprising 35 percent of all juveniles arrested.

While Native Hawaiians suffer from the same diseases as others in Hawai'i and the U.S. as a whole, they have greater mortality rates overall and for the major causes of death, such as diseases of the heart, cancer, cardiovascular disease, and diabetes. When Native Hawaiians are compared to other major ethnic groups (Caucasian, Japanese, Filipino) in the State, Native Hawaiians are found to lead in risky behaviors in six of the eight categories, having the highest rates in seatbelt nonuse, obesity, smoking, acute drinking, heavier drinking, and drinking & driving (the other two categories are "current hypertension", for which Native Hawaiians have the second highest rate, and "sedentary lifestyle", for which they do better than average). Many of these risky behaviors have their origins in childhood and/or adolescence, such as has been shown for obesity.

Currently, there are State efforts to develop an adolescent health network, to coordinate all youth services, and to coordinate all services for Native Hawaiians, including Native Hawaiian youth at risk (e.g., pregnant teens, school dropouts, juvenile offenders). Furthermore, the Native Hawaiian Health Care Act of 1988 (Public Law 100-579) will lead to the eventual establishment of Native Hawaiian health systems throughout the State that will provide health promotion, disease prevention, and primary care services.

At the federal level, support for adolescent ethnic minorities can be provided through mechanisms already in place. Earmarked activities for ethnic minorities could be placed in all adolescent programs, and similarly, adolescent activities could be placed in all ethnic minority programs. There also are precedents for a more fundamental policy focus on the health and related needs of all adolescents, such as already exists for age-related groups such as for the aged and for mothers and infants. Possibilities include an "Administration on Adolescents", an "Office for Adolescents", and/or even a "National Institute for Adolescent Health", each with a branch/division on ethnic minorities. There will clearly be resistance to such substantial changes, but these are tried and true methods for establishing substantial, long-term commitments to the health and related needs of adolescents.

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HEALTH AND RELATED SERVICES FOR NATIVE HAWAIIAN ADOLESCENTS

INTRODUCTION

This analysis focuses on health and related services for adolescents of Native Hawaiian ancestry residing in the State of Hawai'i.

There is little specific information on Native Hawaiian adolescents, and most of the available information is on adolescents in general, and on Native Hawaiians in general. Moreover, much of the information is descriptive, with little evidence of the causes (and remedies) for the health and related problems described in this analysis. Nevertheless, the consistent undercurrent of this analysis is that the health and related problems of Native Hawaiian adolescents -- and of Native Hawaiians of all ages -- are those often found in association with low income status, aggravated by a clash between traditional Native Hawaiian culture and values and the predominantly Western-oriented society of the State of Hawai'i.

In order to put the issues concerning Native Hawaiian adolescents in the proper context, we start with an overview of the Native Hawaiian population residing in Hawai'i.

Various terminologies have been used to describe Native Hawaiians. In federal statutes, "Native Hawaiian" refers to any person of Hawaiian ancestry. In the State of Hawai'i, "native Hawaiian" (n versus N) refers to persons with at least 50 percent

Hawaiian blood quantum for the purpose of determining eligibility for homestead rights on Hawaiian Homelands. All other persons of Hawaiian ancestry are collectively known as "Hawaiian". However, the State Department of Health, in its data-gathering activities, collectively refers to all persons of Hawaiian ancestry as "Native Hawaiians" (in similar fashion as in federal statutes), and further disaggregates Native Hawaiians into "Hawaiians" and "Part-Hawaiians", with "Hawaiians" in this instance referring to persons of 100 percent Hawaiian blood quantum.

For this analysis, the term "Native Hawaiian" will be used to collectively describe persons of Hawaiian ancestry, with further categorization into "Hawaiians" and "Part-Hawaiians" in some of the data presentations. When the terms are used in different ways, such differences will be made explicit.

The 1980 U.S. Census identified 118,251 persons living in Hawai'i who self-identified themselves in the ethnic category of "Hawaiians", and 136,341 persons who claimed some degree of Hawaiian ancestry (i.e., had one or more Native Hawaiian ancestors) (22). In other words, given the choice of ethnic groupings, 118,251 persons, whatever their actual degree of Hawaiian blood quantum, chose the "Hawaiian" category, and an estimated 136,341 persons knew that they had some degree of Hawaiian ancestry.

In contrast, the Health Surveillance Program (HSP), conducted annually by the Hawai'i State Department of Health on a 2 percent sample of the total population of the State (9), estimated that there were 175,909 Native Hawaiians living in Hawai'i in 1980.

The HSP estimates are based on a questionnaire in which respondents are asked to identify the race or combination of races of their father or mother. "Hawaiians" are represented by respondents with both parents identified as "Hawaiian" only, and "Part-Hawaiians" are represented by respondents who have at least one parent with Hawaiian blood. The estimated Native Hawaiian population is the sum of respondents in these two groups. (All respondents are placed in one of eight possible ethnic categories: Caucasian; Japanese; Filipino; Chinese; Pure Hawaiian; Other Pure Unknown; Mixed: Part-Hawaiian; Mixed: Non-Hawaiian; and Others. Any person of mixed ancestry who has at least one parent of Hawaiian ancestry is placed in the "Mixed: Part-Hawaiian" category.)

Why the large discrepancy between the 1980 HSP (175,909) and Census (136,341) estimates of persons of Hawaiian ancestry? Identification by some Part-Hawaiians with another ethnic category probably was the reason for the Census count of 118,251 persons who identified best with the ethnic category "Hawaiian", but there is no explanation why even the Census estimate of persons who knew of their Native Hawaiian ancestry was significantly lower than the HSP estimate of persons who knew that at least one of their parents was of Hawaiian ancestry (136,341 versus 175,909)).

The 1980-1985 yearly averages from the HSP were 971,470 total resident population and 184,841 Native Hawaiian population, or Native Hawaiians comprising 19.0 percent of the total population. Using the 1980 Census estimate of the total population of 907,635 (excluding active duty armed forces personnel but including military dependents, because the HSP excludes military personnel living in barracks and others living in institutions) and the 1980 HSP's Native Hawaiian population estimate of 175,909, Native Hawaiians would have comprised 19.4 percent of the total resident population (20), a percent nearly identical to the HSP estimate. Thus, the identifiable Native Hawaiian population currently comprises about one in every five residents of Hawai'i. If we take the 1980 Census and HSP results as rough proxies, then 118,251 out of 175,909 Native Hawaiians residing in Hawai'i, or 2 of every 3 (67%), think of themselves as principally of Native Hawaiian ancestry.

In 1984 a special survey (14), sponsored by the Office of Hawaiian Affairs of the State of Hawai'i, was performed on persons identified as Native Hawaiian in the annual HSP. This survey was done in order to estimate the distribution of persons with different degrees of Hawaiian blood quantum in the overall resident Native Hawaiian population. More than sixty percent (61.4%) of Native Hawaiians were estimated to have less than half Hawaiian blood quantum, and "pure" Hawaiians comprised less than 4 percent (3.7%) of the total.

The 1980 U.S. Census also estimated that there were approximately 177,900 Native Hawaiians living in the United States, 122,660 in Hawai'i (this figure differs slightly from the estimate above of 118,251 because of the use of different samples from the Census data base) and 55,240 in other States. Thus, at any time, about 69 percent, or 2 of 3, of all Native Hawaiians live in Hawai'i. Approximately 16 percent of Native Hawaiians born in Hawai'i move elsewhere (12).

The number of Native Hawaiians is small, totalling only approximately 200,000 in Hawai'i, even though they represent nearly 20 percent of the State's population. Furthermore, while there are clusters of predominantly Native Hawaiian communities, they are distributed throughout the islands of Hawai'i. Finally, while Hawai'i probably has the best ethnicity health statistics of any State, health and related services specifically for Native Hawaiians is a recent policy issue, and aside from statistical analyses, there have been few quantitative analyses of services to Native Hawaiians. Therefore, when we attempt to focus on a sub-population of Native Hawaiians, such as adolescents, there will not be the data and literature base as might exist for the Black, Hispanic, and Native American populations.

THE NATIVE HAWAIIAN POPULATION IN HAWAI'I

Demography

The Native Hawaiian population in Hawai'i is diminishing at the same time it is burgeoning, trends that on closer examination will be found not to be paradoxical. The number of persons with Native Hawaiian ancestry is increasing rapidly from high birth rates and high rates of intermarriage with non-Native Hawaiians (all of their offspring will be persons of Hawaiian ancestry). However, with intermarriage with non-Native Hawaiians, the degree of Hawaiian blood quantum in the Native Hawaiian population is simultaneously decreasing. In 1987, less than half (47 percent) of Native Hawaiian marriages were with other Native Hawaiians. Native Hawaiians comprise the largest ethnic group of newborns. Over 29 percent (29.3%) of infants born in the State in 1987 were Part-Hawaiian, followed by 23.5 percent for Caucasians, 15.6 percent for Filipinos, and 12.5 percent for Japanese (16).

Because of intermarriage with other ethnic groups, the Hawaiian population now comprises less than five percent of all Native Hawaiians and is significantly older and rapidly diminishing in numbers. The Part-Hawaiian population, on the other hand, is young and rapidly increasing in numbers. Figure 1 compares the percent distribution by age groups of the U.S. population versus the Hawaiian and Part-Hawaiian populations living in Hawai'i in the early 1980's. Forty percent of the U.S. population was under age 25, compared to only 20 percent of Hawaiians but 61 percent of Part-Hawaiians. At the other end of the age spectrum, 21 percent of the U.S. population, 30 percent of Hawaiians, and only 8 percent of Part-Hawaiians were over age 55.

By 1986, there were only an estimated 652 Hawaiians under age 18, compared to 92,930 Part-Hawaiians in this age group (see table 1). Because of the great number of Part-Hawaiians compared to Hawaiians, the overall Native Hawaiian population's characteristics will be nearly identical with that of the Part-Hawaiian population.

In 1986 Native Hawaiians comprised 19.8 percent of the total State population of 1,032,454, second in numbers only to Caucasians

(24.7 percent) and Japanese (22.1 percent) (see figure 2). Native Hawaiians resided among the various islands of the State in generally similar distributions as all other ethnic groups (see figure 3). However, the "neighbor islands" (islands other than O'ahu, where the State capital, Honolulu, is situated), particularly Moloka'i, have proportionately more Native Hawaiians among their residents than did O'ahu, the major population center of the State (see figure 4). (The exception is Lana'i, which is predominantly Filipino.)

Using 1980 Census data, other characteristics of the Native Hawaiian population that are of relevance to adolescent issues include (10):

- Native Hawaiians have higher marriage rates than non-Native Hawaiians in the 15 to 24 age group;
- while Native Hawaiian divorce rates peak at lower ages than those of non-Native Hawaiians, overall Native Hawaiian divorce rates are lower than those of non-Native Hawaiians;
- Native Hawaiian mothers are three years younger on average, have higher birth rates in the lower age groups, and have higher percentages of births in the higher birth orders (3+ births), than non-Native Hawaiian mothers;
- about 75 percent of Native Hawaiian children live in married-couple families, compared to 86 percent of non-Native Hawaiian children (in 1987, 45 percent of all illegitimate live births by the race of the mother, and 55 percent by the race of the child, were Native Hawaiian (16)), but 93 percent of Native Hawaiians live

in family households, compared to 86 percent of non-Native Hawaiian children; and

- the average Native Hawaiian household is 40 percent larger than the average non-Native Hawaiian household, and the average number of persons in Native Hawaiian families is 27 percent larger.

Socio-economic Indicators

Figure 5 summarizes family yearly gross income, comparing the proportion of Native Hawaiians versus all other ethnic groups combined in each income category. Recalling from information presented above that Native Hawaiians comprise about 20 percent of the total population, figure 5 reveals that Native Hawaiians are overrepresented in the low income categories, especially in the lowest income category and underrepresented in the higher income categories.

Other salient characteristics of Native Hawaiian households, using 1980 Census data, are as follows (10):

- Native Hawaiians have 12.8 percent lower median household income and 22.5 percent lower mean family income than non-Native Hawaiians;
- Native Hawaiians have lower mean household or family incomes than non-Native Hawaiians within all income types -- with the exception of the "Public Assistance" income type, at each level of number of workers in the family, in ech age group of family householder, and for each family type category -- with the exception of "Female householder, no husband present";

- a higher proportion of Native Hawaiian families receive public assistance than non-Native Hawaiian families (18.4 percent versus 8.2 percent);
- a higher proportion of Native Hawaiians than non-Native Hawaiians are below the poverty level (15.4 percent versus 9.1 percent), and on the basis of proportion of the total population, Native Hawaiians are overrepresented by 43.1 percent in the poverty population;
- more child abuse and child neglect cases, with abuse most-often associated with family discord, lack of tolerance, and loss of control, and neglect most-often associated with insufficient income; and
- more criminal offenders, with Native Hawaiians comprising 35 percent of all juveniles arrested (13).

Education

The distribution of Native Hawaiian adolescents in grades 5 through 12 (those approximately in the age group 10 to 18) show that the percent of students that are Native Hawaiians is greater in less urbanized areas. For example, figure 6 reveals that, on O'ahu, there are actually more Native Hawaiian adolescents in either the Windward or Leeward school districts than in central Honolulu by both percent and absolute numbers. Moreover, the neighbor islands also have a higher proportion of Native Hawaiian adolescents than does central Honolulu.

Table 2 reveals that the Native Hawaiian adolescent population is among the largest of the ethnic groups; it is the largest in Windward O'ahu and on the island of Hawai'i, and second largest throughout the State and in Leeward O'ahu (and virtually tied for second on the island of Kaua'i). Also notable is that within each school district, the proportion of children who are Native Hawaiians increases in the lower grades, which is compatible with the observation made earlier that the Native Hawaiian population in Hawai'i is young and growing.

Enrollment of Native Hawaiian children in preschools is low relative to most other ethnic groups in Hawai'i (perhaps because of the cost of preschool); primary school completion by Native Hawaiian children is higher than many other ethnic groups; but high school completion rates are lower than for all other groups except Samoans. School attendance by Native Hawaiians drops sharply after ages 16 to 17 (1).

A much lower percentage, 20 percent, of Native Hawaiian students receive some college education, compared to nearly 40 percent of non-Native Hawaiian students in Hawai'i (10). About 10.7 percent of Native Hawaiians have completed college, or some other form of higher education, compared to 19 percent for whites, 28.7 percent for Japanese, and 40.1 percent for Chinese (1). These statistics are also reflected when the total number of students at a given time are examined. In 1980, only 9.9 percent of all Native Hawaiian students were in college, compared to 22.5 percent of all non-Native Hawaiian students (10).

On the basis of standardized tests, Native Hawaiian students persistently perform below the statewide averages. For example, using the Stanford Achievement Tests, the percent of Native Hawaiian students scoring in the low range are greater than students statewide for both math and reading skills. Conversely, in the high range, the percent of Native Hawaiian students is lower than for students statewide, and the percent of Native Hawaiian students performing in the high range decreases with advancing grade level (see table 3).

Health

Health Status

While Native Hawaiians generally suffer from the same diseases as others in Hawai'i and the U.S. as a whole, their mortality rates are generally greater for the major causes of mortality, such as diseases of the heart, cancer, cardiovascular disease, and diabetes (see figure 7). Diabetes is a special problem among Native Hawaiians, with age-adjusted prevalence rates twice those of all other ethnic groups combined in the State (see figure 8). Diabetes among Native Hawaiians is almost exclusively of the type that appears in adulthood, Type II, or non-insulin dependent diabetes mellitus (NIDDM), rather than Type I, insulin-dependent diabetes mellitus (IDDM), or "juvenile" diabetes (see figure 9).

About two-thirds of patients with Type II diabetes are obese when the disease is first diagnosed, and Native Hawaiians have the highest obesity rates among the ethnic groups in Hawai'i (see figure 10). A study of obesity in Native Hawaiian children supported by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) has found that Native Hawaiian children are substantially heavier on average than U.S. national norms by age six, and that percentage of Hawaiian blood quantum is significantly correlated with an overweight state (24).

While the risk factors identified in figure 10 are from those Hawai'i residents 18 years or older, it is reasonable to assume that many of these risky behaviors have their origins in childhood and/or adolescence, such as has been shown for obesity. Among the risk factors identified in figure 10, when Native Hawaiians are compared to other major ethnic groups (Caucasian, Japanese, Filipino) in the State, Native Hawaiians are found to lead in risky behaviors in six of the eight categories, having the highest rates in seatbelt nonuse, obesity, smoking, acute drinking, heavier drinking, and drinking & driving (16).

A qualifying factor in interpretation of these risky behaviors is that Hawai'i's residents generally engage in less risky behaviors than the U.S. population as a whole. For example, while Native Hawaiians lead the State in seatbelt nonuse at 11.9 percent (Statewide average of 7.3 percent), the national average is 58 percent; similarly, Native Hawaiians lead the State in smoking with 27.8 percent (Statewide average of 22.3 percent), but the national average is 29.1 percent (25). Nevertheless, other ethnic groups in Hawai'i have shown that there is substantial room for improvement among Native Hawaiians in reducing their health risks.

As stated earlier, nearly 30 percent of births in Hawai'i are of Native Hawaiian infants (compared to Native Hawaiians comprising approximately 20 percent of the population); and Native Hawaiian mothers are three years younger on average, have higher birth rates in the lower age groups, and have higher percentages of births in the higher birth orders (3+ births), than non-Native Hawaiian mothers. Native Hawaiian women also have the highest rate of illegitimate births in the State. In 1987, 37.3 percent of all births of Native Hawaiian infants were illegitimate (Filipinos: 19.2%; Caucasians: 11.2%; Japanese: 8.4%; Chinese: 6.6%; Koreans: 4.4%; State average: 21.3%) (16).

In 1987, of 4,306 infants born to Native Hawaiian mothers (by race of the child, there were 5,786 Native Hawaiian infants born in 1987), 8 were born to mothers less than 15 years old, 244 to mothers ages 15 to 17, and 501 to mothers ages 18 to 19. Compared to all other ethnic groups combined, among Native Hawaiians, 5.9 percent of total births were to mothers 17 or younger, compared to 2.1 percent for all other ethnic groups; and 17.5 percent of total births were to mothers 19 or younger, compared to 7.5 percent for all other ethnic groups (16).

Based on the race of the mother, in 1987 Native Hawaiians had the highest infant death rate in the State, 10.2/1,000 live births, compared to a State of Hawai'i rate of 8.8/1,000. (The Native Hawaiian infant death rate, however, was nearly equal to the U.S. rate of 10.0/1,000.) Three of the 44 infant deaths among Native Hawaiian mothers were to mothers ages 15 to 17 (6.8 percent of total deaths), with 9 deaths among mothers ages 18 to 19 (20.5

percent of total deaths). Among all other ethnic groups, 1 of the 120 infant deaths was to a mother age 15 to 17 (0.8 percent of total deaths), and 8 deaths to mothers ages 18 to 19 (6.7 percent) (16). These 1987 data are consistent with the trends that have been observed in previous years vis-a-vis Native Hawaiians versus other ethnic groups in the State.

Finally, Hawai'i's Health Surveillance Program (HSP), from which much of the State's health information other than vital statistics is drawn, also asks questions about physical impairments. As expected, the young of all ethnic groups tend not to be impaired. On an age-adjusted basis, Native Hawaiians have an impairment rate slightly higher than the average (155.6/1,000 vs. 152.5/1,000; range of 198.4/1,000 for Caucasians to 82.0/1,000 for Filipinos). Among impairment categories (vision, hearing, back and spine, upper extremity-shoulder, lower extremity-hip, and other), Native Hawaiians in the 5 to 17 age group had impairment rates above the All Ethnic Groups rate for all impairment categories, with only Caucasians having higher rates overall and for most categories. In the 5 to 17 age group, hearing impairments are the most prevalent of any single impairment, with Native Hawaiians and Caucasians having impairment rates twice that of other ethnic groups (Native Hawaiians: 18.7/1,000, Caucasians: 18.0/1,000, Japanese: 9.8/1,000; Filipinos: 8.2/1,000; Others/Unknown: 10.5/1,000, All Groups: 13.8/1,000) (28). (Data were available for the ages 5 to 17 group, and not for ages 10 to 18.)

Hearing impairments among Native Hawaiian children, most likely from untreated middle ear infections, in fact have been recognized as a major problem and a probable contributor to poor school performance. In a study conducted at the beginning of the 1985-1986 and 1986-1987 school years, 192 children entering Kamehameha Schools' (a private school limited to children of Native Hawaiian ancestry) preschools were screened for hearing dysfunctions. Only 22 percent of the children passed the hearing screening, failing in one or more of the following test categories: 1) audiometry (75 failed), 2) tympanometry (65 failed), and 3) otoscopy (130 failed). Forty-three of the 192 children failed all three tests. Comparing Fall and Spring test performances of these 192 preschoolers, statistically significant differences were found between those who passed the hearing tests and those who did not in vocabulary, language usage, general information, and quantitative concepts, but not in language understanding and psycho-motor coordination (5). These findings have led to a recently initiated project to produce a significant improvement in the educational achievement of Native Hawaiian preschool children within two years, through an experimental program consistently of: 1) an enhanced hearing and speech screening procedure; 2) a followup effort that insures that every child who fails the screening receives appropriate medical care; 3) the reduction of classroom ambient noise levels to an educationally-acceptable level as specified by an acoustic engineer; 4) the amplification of instructional communication to a level that yields an educationally effective signal-to-noise ratio; 5) the implementation of special classroom teaching techniques and equipment (electronic speech trainers) designed to improve the communication competence of children experiencing moderate speech and hearing difficulties; and 6) an individualized home and school communication therapy program for those children who are identified as most needful in the screening (5).

Health Insurance

A recent background paper prepared for the congressional Office of Technology Assessment concluded that 4.6 million adolescents, ages 10 to 18, or 15 percent overall, were without public or private health coverage in 1987 (6), an estimate similar to the estimate of 15 to 17 percent of uninsured in the United States' population as a whole.

Hawai'i's residents, however, are better situated. Its Prepaid Health Care Act, mandating employment-based health insurance, was enacted a few months prior to the Federal Employee Retirement Security Act of 1974 (ERISA). (Note: "Prepaid" as used here is not the same as the concept as used in, for example, health maintenance organizations (HMO's). The Prepaid Health Care Act is mandatory, employment-based health insurance program, under which the employee may enroll in any of the usual range of health insurance programs.) Hawai'i's Act was exempted from the preemption provisions of ERISA, which was subsequently interpreted by the courts to prohibit States from imposing mandatory health insurance requirements on employers. (An amendment to the Prepaid

Health Care Act adding substance abuse and mental health benefits was specifically excluded from the congressional exemption to ERISA, so the State cannot mandate that employers provide these benefits.) As a result of Hawai'i's Prepaid Health Care Act, only an estimated 5 percent (with a range of 3 to 7 percent) of the State's residents are uninsured; and based on a preliminary survey of public school students and their parents, students lacking health insurance also fall in the 5 percent range (17).

However, the State's Prepaid Health Care Act extends only to employees who work more than 20 hours per week for any employer. Employers are not required to subsidize coverage for workers' families, so families of low-income workers are probably often not covered; nor would families of part-time workers, who are not covered by the law. Furthermore, the Hawai'i Department of Health has noted that their preliminary school survey indicates that schools in predominantly "blue collar" or "working poor" areas seem to have more uninsured children (17).

Given the predominance of the Native Hawaiian population in the lower income categories as described above, those low-income households not eligible for public assistance programs might lack health coverage. However, those Native Hawaiians who are eligible for public assistance programs would be expected to be enrolled in public assistance programs in greater proportion than the proportion of the total population that Native Hawaiians represent, because the proportion of Native Hawaiians with low incomes is much higher than the State average (in figure 6, Native Hawaians with incomes below $10,000/year was twice their proportion of the State's population). For unknown reasons, however, while Native Hawaiians are indeed overrepresented (on the basis of proportion of population) in the Aid to Families with Dependent Children (AFDC), General Assistance, and food stamps programs, they are underrepresented as recipients of medical assistance (Medicaid) and Aged/Blind/Disabled assistance (10).

In June 1989, the Hawai'i State legislature enacted, and the Governor signed into law, the "State Health Insurance Program Act" (H.B. No. 1906, Act No. 378), with the purpose of providing health insurance coverage to the remaining uninsured. The legislature also concomitantly ordered a review of the State's utilization of its Medicaid program and the development of a strategic plan to maximize recovery of Federal dollars from Medicaid (House Concurrent Resolution No. 256, and Senate Concurrent Resolution No. 214). The new insurance program is expected to be implemented after March 1990.

Finally, in October 1988, Public Law 100-579, the Native Hawaiian Health Care Act of 1988, was enacted to establish Native Hawaiian health care systems concentrating on health promotion, disease prevention, and primary care services (see Appendix A). The services and service systems to be established under this legislation are intended to address health problems of particular severity among Native Hawaiians, to be under the control of Native Hawaiians, and to be provided in a culturally appropriate manner. Planning activities are to be initiated in fiscal year 1990, with provision of services beginning in fiscal year 1991.

The services of traditional Native Hawaiian healers may be provided; education in health promotion and disease prevention must be provided whenever possible by health care practitioners, community outreach workers, counselors, and cultural educators of Native Hawaiian ancestry; interpreters must be provided for clients with limited ability to speak the English language; and health practitioners of Native Hawaiian ancestry must significantly participate in the planning, management, monitoring, and evaluation of health services at the community level.

Cultural Factors

Cultural factors affecting Native Hawaiians have been examined in several studies in recent years.

In a 1986 needs assessment review for Hawai'i's Child and Adolescent Service System Program (15), the following observations were made:

> A number of studies note the cultural concepts of health in Hawaiian and other Polynesian cultures, and compare these to Western concepts and cultural values. A point often made is that health is defined and conceptualized differently in each cultural setting, and that it is important to take these differences into consideration in providing health services. For instance, the Hawaiian language has no word for mental health or illness. Instead, the Hawaiian cultural concepts of mental health are more holistic than Western concepts and include physical and spiritual states (citation omitted).
>
> There appears to be widespread use and knowledge of non-professional, lay and informal sources of mental health care. In one Waianae (note: this is a predominantly Native Hawaiian community) survey, two-thirds of all respondents had some knowledge of informal non-professional sources of care. These sources included kahunas, ministers, and friends. One fifth of all respondents identified "kahuna" (note: these are

> traditional healers).
>
> In another statewide survey of Hawaiians, 78% of all respondents reported participating either frequently or occasionally in ho'oponopono (a traditional Hawaiian problem-solving process). In the same survey, help for personal and psychological problems most often was sought from ministers and religious organizations...(citation omitted).

These observations, and the poor comparative performance of Native Hawaiian children and adolescents in educational skills described earlier, are disturbingly echoed in an earlier (1972) study of Native Hawaiian adolescents (8):

> Self-disparagement in a significant number of ethnic Hawaiian youth on the Island of Hawaii is deeply imbedded in personality by age 18. These unpretentious, forthright children of an island people who value independence and freedom, warm, everlasting family ties, and autonomy of emotions are becoming strangers in their own land. In terms of intellectual ability in the performance of the school's academic tasks, they think they are inferior, incapable of success in liberal studies beyond high school...
>
> ...The ethnic Hawaiian child, above all else, develops a particularly vital identification with many members of an extended family, and with everything that grows and lives on the land of his verdant island and on the ocean shelf surrounding it. In the communal life of the family, particularly in rural areas, the joys of today take precedence over planning for a vague, dubious future...
>
> ...Hawaiian youth seem almost instinctively afraid of getting into school books. They hesitate to devour what is inside. This may be partly because books never have been vital to life goals of the family, to be sure, as well as because of reading difficulties in the early grades. But in a more profound way, the resistance to print stems from child-rearing practices emphasizing very early independence (by age 7 and 8 years), self-reliance and learning from direct experience rather than from symbols...The trouble is that a forest and seascape island culture has vanished forever in the Hawaiian islands. The principal means of self-fulfillment now is the symbol, the book, the idea in recorded media.

And again, more recently, similar observations have been made (4):

> Interaction between Hawaiian children and their teachers is impaired by cultural socialization practices that de-emphasize certain patterns of verbal exchange. For example, direct questions to a child by an adult may be interpreted as displeasure or ridicule, and interactions with adults on a one-on-one basis may be unfamiliar since direct communication is ordinarily with peers rather than adults. Furthermore, while adults at home often do not expect immediate compliance with verbal requests, teachers do; and when adults are punitive or critical, a child's learned preference seems to be withdrawal or avoidance, a response that teachers find disconcerting. Finally Hawaiian youth may be further inhibited in school by the emotional neutrality of teachers, a characteristic that makes them less salient and results in reduced student attentiveness.
>
> ...Western cultural characteristics of success in many areas (e.g., education, business) are diametrically opposed to Hawaiian cultural or moral values. For example, Hawaiian values stress cooperative effort for mutual gain within a group, and scorn individual ambition, personal accumulation, and competition. Scholastic achievement in most educational settings is impeded when aggresiveness and individual striving are culturally unacceptable to students.

Finally, the very meaning of what it means to be "Hawaiian" is being transformed by extensive intermarriage with other racial groups (4):

> Extensive intermarriage with other racial groups has produced a wide variety of childrearing patterns and practices among Hawaiians. Among those family systems that build on strong Hawaiian traditions common characteristic features include: multiple parenting within an 'ohana (note: refers to an extended family) group, early indulgence followed by a shift at two to three years of age to a primarily peer-directed socialization experience, socialization towards a group/family oriented values system, and learning experiences that emphasize modeling and mutual participation rather than verbal interaction. Educators and social service workers often identify features of Hawaiian childrearing practices that they consider changeworthy. Anthropologists, meanwhile, push strongly in two directions: some find the Hawaiian system to be laudable and therefore recommend a "hands-off" policy; others note a severe lack of fit between traditional practices and conditions in today's world. To the latter, child abuse statistics and other indicators of dysfunction suggest that some changes in Hawaiian child-rearing patterns, or changes in societal support for such practices, are necessary.

> ...A few years ago it was common to use the label "Part Hawaiian" and if someone asked about your racial background, to measure out the parts, like "I am half Hawaiian, a quarter English, one-eighth Japanese, and, I think, a little Chinese." Today, unless pressed, many part Hawaiians are apt to say simply, "I am Hawaiian," downplaying their non-Hawaiian heritage, although not necessarily denying it. It is quite a change from, say, the 1930s and '40s, when some part Hawaiians preferred not to mention their Hawaiian extraction. Nowadays, what you are on the outside doesn't seem to count as much as what you are inside. (Author's note: this pride currently extends to how "Hawaiian" -- not "Hawaiian" -- words are written, with accentuation marks to ensure proper pronounciation.)
>
> ...(But) there is discord between various Hawaiian service agencies, social organizations and political factions, and "Native" Hawaiians (of 50% or more aboriginal blood) are set apart from "Part" Hawaiians (of less than half blood quantum). Finally, there is, and has long been, a lack of consensus over the notion of biculturalism -- whether a blend of two or more cultures should be embraced, ethnic identity exclusively retained, or cultural background eradicated completely in the interest of assimilitation into a larger society.

In sum, the identity of Native Hawaiians as an ethnic group is slowing eroding from intermarriage with non-Native Hawaiians, and traditional Native Hawaiian culture and values are harder to maintain in the face of a Western-dominant culture and values. However, there are strengths to doing things the "Hawaiian" way, such as cooperative effort, group well-being as the source of individual well-being, and strong family affiliation, as well as Hawaiian definitions of health and Hawaiian health practices that can work in concert with Western health care.

HEALTH-RELATED SERVICES FOR ADOLESCENTS AND FOR NATIVE HAWAIIANS

In general, the State of Hawai'i has a wide range of health and social services programs, and the Prepaid Health Care Act and

State Health Insurance Program (both of which were briefly described above and which make Hawai'i the State with the smallest proportion of its residents without health care coverage) are representative of the State's commitment toward improving the social welfare of its residents.

There is a large variety of services for adolescents, and services specifically for Native Hawaiians as a group are increasing. However, insofar as services specifically for Native Hawaiian adolescents are concerned, there is still a paucity of such services, but the infrastructures that will allow for greater activity directed at the health and related service needs of Native Hawaiian adolescents are gradually being put into place.

THere has been increased attention to services for Native Hawaiians at the federal level. The federal Mental Health and Alcohol and Drug Abuse Block Grant to the State of Hawai'i has a mandatory 17 percent set-aside for Native Hawaiians in funding for Drug Abuse programs. The 1989 Drug Abuse disbursements for programs (or elements of programs) directed at Native Hawaiians actually equalled 28 percent of funds. The Native Hawaiian Health Care Act of 1988 (Public Law 100-579) will lead to the eventual establishment of Native Hawaiian health services delivery systems throughout the State that will provide health promotion, disease prevention, and primary care services. Among provisions beneficial to Native Hawaiian adolescents will be pregnancy and infant care services, family planning services, immunizations, prevention and control of otitis media and other infectious diseases, control of sexually transmittble diseases, reduction in the misuse of alcohol and drugs, and mental health care (see Appendix A).

At the State level, there is now established in the State Department of Health (DOH), an Office of Hawaiian Health, with the mission of planning, coordinating, and assuring the implementation of culturally sensitive and relevant health services for Native Hawaiians; developing comprehensive, population-based plans for providing health services to Native Hawaiians; and establishing an advocacy program for Native Hawaiians within DOH (18). Moreover, in the Native Hawaiian Health Care Act, a newly established Board charged with implementing the Act includes the Office of Hawaiian Health, DOH, among the five organizations comprising the Board (see Appendix A).

In its 1989 Session, the Hawai'i State Legislature created a Task Force to examine the provision of services to Native Hawaiians, under the direction of the State Office of Hawaiian Affairs, to: 1) inventory current services and programs for Native Hawaiians; 2) assess the use and accessibility of these services and programs; 3) analyze the quality of coordination of these services and programs; 4) identify critical needs and requirements that need to be further addressed; and 5) provide recommendations on improving accessibility, the quality of coordination, and the provision of future services and programs for currently unmet needs. Among provisions directly relevant to Native Hawaiian adolescents are to be specific analyses of: 1) educational services for Native Hawaiian youth, ages three to nineteen years of age; and

2) special needs of "at risk" categories such as school dropouts, juvenile offenders, and pregnant teenagers (2).

In addition, in the 1989 Session of the Hawai'i State Legislature, an Office of Youth Services was created within the Department of Human Services. This Office is to examine currently available services for youth and report back to the 1991 legislature on coordinating existing services and whether there is a need for new services (11).

The goal of the Maternal and Child Health Network of the Maternal and Child Health Branch of the Hawai'i Department of Health -- a project initiated in October 1987 and to be completed by October 1990 -- is to develop a health network to improve the health status of youth from 10 to 19 years of age. The Network intends to accomplish its goal by establishing: 1) a permanent unit for adolescent health within the Department of Health (for policy and systems development), 2) a system to coordinate adolescent health services at the State level (for administration), and 3) case management systems (for local delivery of health services) (19).

The Maternal and Child Health Network is one outcome of a Child and Adolescent Service System Needs Assessment that was completed in 1986 (15). The Recommendations of that report can be found in Appendix B.

The Volunteer Information and Referral Service, a private, nonprofit organization, maintains a Community Clearinghouse database on public and private social services agencies (27). More specifically for adolescent services, the Center for Youth Research of the Social Science Research Institute of the University of Hawai'i at Manoa is in the process of developing a computerized, comprehensive information system of all available youth and family-related services in the State, with the primary purpose of making its data base available to all youth and family-related agencies in Hawai'i, the Pacific Basin, and the Mainland (i.e., the continental United States) (26).

One activity that is specifically targeted to Native Hawaiian adolescents is a three-year pilot program funded by the U.S. Department of Education that has been established for a "Native Hawaiian Drug Free Schools/Communities Program". The project is intended to develop a kindergarten through grade 12 curriculum, educational programs and materials, and resource and referral services that are appropriate for Native Hawaiian communities (see Appendix C).

Other adolescent services/activities may not be directed exclusively at Native Hawaiian adolescents but have a large proportion of Native Hawaiians in their client population, because the targeted communities are largely Native Hawaiian. Examples of such activities are those in the Waianae and Waimanalo communities on O'ahu, two predominantly Native Hawaiian communities.

In sum, there are parallel efforts curently proceeding statewide: 1) to coordinate programs either solely or substantially providing health and related services to adolescents, and 2) to establish federally mandated and supported health promotion, disease prevention, and primary medical care services to Native Hawaiians.

Within the adolescent programs, there should be expanding activities directed at Native Hawaiians, because of State Legislature interest and the establishment of the Office of Hawaiian Health within the State Department of Health. Within the forthcoming Native Hawaiian health care systems, several of its service components will have adolescents as the primary target group. An important development to follow in the future is whether the intent of this Federal legislation -- i.e., to raise the comfort level of Native Hawaiians in using a Western-based health system by placing it in their control and to infuse it with traditional Native Hawaiian healing practices -- can substantially reverse the poor health and health practices of Native Hawaiians residing in Hawai'i.

CONCLUSIONS

Native Hawaiians residing in Hawai'i have similar characteristics to most other ethnic minorities living in the United States: 1) a substantial proportion of Native Hawaiians are at the lower end of the State's income scale and, not surprisingly, exhibit the relatively poor social indicators that usually accompany low economic status; and 2) cultural and socialization factors, leading to "a lack of consensus over the notion of biculturalism -- whether a blend of two or more cultures should be embraced, ethnic identity exclusively retained, or cultural

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background eradicated completely in the interest of assimilation into a larger society" (4).

Native Hawaiian adolescents must surely be affected by fundamental changes in their culture, by the ambivalence that their adult role models are manifesting, and by the accelerated pace of urbanization of their islands since Hawai'i gained statehood in 1959. Many Native Hawaiian adolescents must feel, as the authors of a book on Native Hawaiian adolescents have characterized them, that they are "strangers in their own land" (8).

The 1986 Hawai'i Child and Adolescent Service System Program Needs Assessment (15) found a need for interventions that encompass an ecological approach, for providers trained in ethno-cultural issues and for ethno-cultural research, and for creative programs for child abuse and neglect that in particular should be ethno-culturally compatible (see Appendix B). The Office of Youth Services, established by the State Legislature in 1989 (11), should help to further specify how this can be accomplished for all of Hawai'i's youth, and the Task Force for Services to Hawaiians, also established by the State Legislature in 1989 (2), should provide a blueprint specifically for Native Hawaiian adolescents. Finally, Public Law 100-579, the Native Hawaiian Health Care Act of 1988, provides a specific vehicle for health promotion and disease prevention services to Native Hawaiians of all ages.

Thus, in Hawai'i, even though there may not yet exist proven culturally appropriate health and related services for Native Hawaiian adolescents, there is at least promising infrastructure developments on which such future services can be based. The Native Hawaiian traditions of "learning by doing", peer-directed socialization, and cooperative effort for mutual gain within a group, are positive attributes for dealing with the problems of drug and alcohol abuse, and for reducing the risky health behaviors that plague the Native Hawaiian community. The inclusion of traditional Native Hawaiian healers and healing practices in the forthcoming Native Hawaiian health care systems -- practices that many Native Hawaiians still use, in addition to their use of Western-based medicine -- are further positive attributes in dealing with personal and psychological problems and in child abuse and neglect.

Finally, the charge to the authors of the Office of Technology Assessment-commissioned papers on ethnic minority adolescents included: 1) evaluation of service needs of adolescents, with a careful analysis and fine differentiation of the needs at various ages and stages of development, so that a developmental perspective within the age boundaries (10 to 18) could be formulated; and 2) implications for Federal policy with respect to conclusions on appropriate utilization, effectiveness, coordination, and continuity of care between targeted services and traditional services, and access (21).

Whether or not these charges can be effectively met in any of the commissioned papers is probably in doubt. Insofar as Native Hawaiian adolescents are concerned, the information is simply not available. Moreover, from the information presented in this analysis on hearing loss in a preschool group of Native Hawaiians, it is evident that interventions must begin before the adolescent years. There are also indications that interventions must begin in the elementary school years, or many Native Hawaiian students will be irretrievably loss by junior high school (2,6). These interventions quite clearly must include parental involvement.

As for implications for Federal policy, some circumstances of the Native Hawaiian situation are special, some generalizable. In terms of the special, probably only other Native Americans -- American Indians and Alaska Natives -- have the option recently opened to Native Hawaiians; i.e., to provide culturally relevant health and related services within their own health care systems. Furthermore, the Hawai'i State government -- both the legislative and executive branches -- recognizes the special needs of Native Hawaiians.

In terms of the generalizable, Federal policy can be used to increase support for adolescent ethnic minorities through mechanisms already in place, through the traditional Federal method of primarily financing resources development, and not direct services. For example, resources could be increased in the areas of: 1) professional training (i.e., scholarship and loan programs for ethnic minorities in adolescent services and studies); 2) interdisciplinary research (cultural, health, social, etc.); and 3) biomedical and health services research (e.g., among Native Hawaiians, diabetes and cancer, use of traditional vs. Western health care). In all of these professional training areas, special emphasis could be given to the training of health services researchers in minority adolescent issues.

Such programs and activities already exist, although none are specifically directed at adolescents. Examples include the following. There are health scholarships for specific ethnic minorities (e.g. American Indians/Alaska Natives and Native Hawaiians, and these are tied to service payback among their own peoples). The Federal National Center for Health Services Research and Health Care Technology Assessment is convening a conference (March 1990) to encourage research in primary care, aimed at young investigators in the field of general pediatrics, general medicine, family medicine, and nursing, and one area of focus is research issues involved in the care of the disadvantaged and underserved, primarily those of ethnic minorities and the poor (7). At the Federal National Cancer Institute, there is a Special Populations Branch exclusively devoted to research issues concerning special populations, which are defined as those with special cancer problems. These special populations currently include Alaska Natives, American Indians, Asian Americans, Blacks, blue-collar groups, the elderly, Hispanics, low-income groups, and Native Hawaiians (23). And of course, within the Federal Department of Health and Human Services, there is an Office of Minority Health.

If activities directed at ethnic adolescents are scattered among various agencies, balkanization of programs for ethnic minority adolescents is obviously a real concern. On the other hand, unless there are specific activities and substantial funds devoted to ethnic minority adolescent issues in the relevant agencies, there will be much "coordination" but little commitment. So a possibility is for identifiable program elements for ethnic minorities in all adolescent programs, and for similar adolescent program elements in all ethnic minority programs.

Finally, there are precedents for more substantial organizational efforts that are age-specific, such as for the aged and for mothers and infants. There are Maternal and Child Health Block Grants, and even a National Institute of Aging. So why not an "Administration on Adolescents", an "Office on Adolescents", and/or even a "National Institute for Adolescent Health", each with a branch/division on ethnic minorities? Such major new efforts will always be resisted by the Executive Branch, but they are tried and true methods of focusing attention and providing substantial resources to a particular problem area. Perhaps the time has come for such major efforts to deal with the health and related problems of ethnic adolescents, and of all adolescents.

Table 1

Age Frequency Distribution: 1986
Native Hawaiians vs Other Ethnic Groups

ETHNICITY

AGE GROUPS	Total Hawaiians	Pure Hawaiians	Part Hawaiians	Other Ethnic Groups
Total	204,716	7,892	196,824	827,738
0 - 9	48,422	202	48,220	120,185
10 - 18	45,160	450	44,710	114,731
19 - 24	24,742	817	23,925	83,702
25 - 34	32,154	1,260	30,894	163,265
35 - 44	20,283	1,235	19,048	102,700
45 - 54	17,536	1,629	15,907	84,793
55 - 64	9,748	1,021	8,727	83,280
65 +	6,671	1,278	5,393	75,082

Source: Analysis based on data tapes provided by the Health Surveillance Program, Hawai'i Department of Health, November 1989

Table 2

Number and Percent of Public School Students by Ethnicity: Grades 5 to 12, 1988-1989

State of Hawai'i

Grade	**Hawaiian**	Filipino	Japanese	Caucasian	Other	Total
5	**3,046**	2,295	1,799	3,067	2,765	12,972
	23.48%	17.69%	13.87%	23.64%	21.32%	100%
6	**2,980**	2,372	1,867	2,911	2,703	12,833
	23.22%	18.48%	14.55%	22.68%	21.06%	100%
7	**2,759**	2,413	1,690	2,569	2,635	12,066
	22.87%	20.00%	14.01%	21.29%	21.84%	100%
8	**2,572**	2,458	1,563	2,508	2,417	11,518
	22.33%	21.34%	13.57%	21.77%	20.98%	100%
9	**2,771**	2,739	1,769	2,713	2,621	12,613
	21.97%	21.72%	14.03%	21.51%	20.78%	100%
10	**2,389**	2,742	1,763	2,659	2,257	11,810
	20.23%	23.22%	14.93%	22.51%	19.11%	100%
11	**2,171**	2,693	1,962	2,511	2,084	11,421
	19.01%	23.58%	17.18%	21.99%	18.25%	100%
12	**1,979**	2,473	2,095	2,250	1,885	10,682
	18.53%	23.15%	19.61%	21.06%	17.65%	100%
Total:	**20,667**	20,185	14,508	21,188	19,367	95,915
	21.55%	21.04%	15.13%	22.09%	20.19%	100%

Table 2 (continued)

Island of O'ahu: Honolulu District

Grade	**Hawaiian**	Filipino	Japanese	Caucasian	Other	Total
5	**432**	468	560	356	788	2,604
	16.59%	17.97%	21.51%	13.67%	30.26%	100%
6	**416**	481	599	323	814	2,633
	15.80%	18.27%	22.75%	12.27%	30.91%	100%
7	**386**	488	467	286	754	2,381
	16.21%	20.50%	19.61	12.01%	31.67%	100%
8	**336**	524	417	276	754	2,307
	14.56%	22.71%	18.08%	11.96%	32.68%	100%
9	**384**	579	481	350	869	2,663
	14.42%	21.74%	18.06%	13.14%	32.64%	100%
10	**340**	654	508	368	864	2,734
	12.44%	23.92%	18.58%	13.46%	31.60%	100%
11	**261**	578	545	352	775	2,511
	10.39%	23.02%	21.70%	14.02%	30.86%	100%
12	**287**	444	609	332	727	2,399
	11.96%	18.51%	25.39%	13.84%	30.30%	100%
Total:	**2,842**	4,216	4,186	2,643	6,345	20,232
	14.05%	20.84%	20.69%	13.06%	31.36%	100%

Table 2 (continued)

Island of O'ahu: Central District

Grade	**Hawaiian**	Filipino	Japanese	Caucasian	Other	Total
5	**290**	474	382	859	699	2,704
	10.72%	17.53%	14.13%	31.77%	25.85%	100%
6	**276**	465	377	838	697	2,653
	10.40%	17.53%	14.21%	31.59%	26.27%	100%
7	**260**	419	339	731	679	2,428
	10.71%	17.26%	13.96%	30.11%	27.96%	100%
8	**252**	474	346	670	631	2,373
	10.62%	19.97%	14.58%	28.23%	26.59%	100%
9	**263**	536	362	768	672	2,601
	10.11%	20.61%	13.92%	29.53%	25.83%	100%
10	**226**	528	342	725	561	2,382
	9.49%	22.17%	14.36%	30.44%	23.55%	100%
11	**239**	494	414	632	486	2,265
	10.55%	21.81%	18.28%	27.90%	21.46%	100%
12	**184**	523	465	589	471	2,232
	8.24%	23.43%	20.83%	26.39%	21.10%	100%
Total:	**1,990**	3,913	3,027	5,812	4,896	19,638
	10.13%	19.93%	15.41%	29.60%	24.93%	100%

Table 2 (continued)

Island of O'ahu: Leeward District

Grade	**Hawaiian**	Filipino	Japanese	Caucasian	Other	Total
5	**656**	552	190	415	476	2,289
	28.66%	24.12%	8.30%	18.13%	20.80%	100%
6	**623**	581	229	374	461	2,268
	27.47%	25.62%	10.10%	16.49%	20.33%	100%
7	**641**	648	224	289	492	2,294
	27.94%	28.25%	9.76%	12.60%	21.45%	100%
8	**551**	646	225	315	431	2,168
	25.42%	29.80%	10.38%	14.53%	19.88%	100%
9	**621**	751	248	354	443	2,417
	25.69%	31.07%	10.26%	14.65%	18.32%	100%
10	**534**	648	291	312	343	2,128
	25.09%	30.45%	13.67%	14.66%	16.12%	100%
11	**430**	696	279	281	308	1,994
	21.56%	34.90%	13.99%	14.09%	15.44%	100%
12	**349**	581	289	248	236	1,703
	20.49%	34.12%	16.97%	14.56%	13.86%	100%
Total:	**4,405**	5,103	1,975	2,588	3,190	17,261
	25.52%	29.56%	11.44%	14.99%	18.48%	100%

Table 2 (continued)

Island of O'ahu: Windward District

Grade	**Hawaiian**	Filipino	Japanese	Caucasian	Other	Total
5	**517** **33.90%**	90 5.90%	137 8.98%	441 28.92%	340 22.30%	1,525 100%
6	**485** **33.33%**	84 5.77%	150 10.31%	440 30.24%	296 20.34%	1,455 100%
7	**392** **31.51%**	84 6.75%	139 11.17%	364 29.26%	265 21.30%	1,244 100%
8	**419** **32.66%**	90 7.01%	140 10.91%	381 29.70%	253 19.72%	1,283 100%
9	**447** **33.33%**	99 7.38%	161 12.01%	364 27.14%	270 20.14%	1,341 100%
10	**362** **29.60%**	105 8.59%	146 11.94%	418 34.18%	192 15.69%	1,223 100%
11	**373** **28.78%**	110 8.49%	164 12.65%	407 31.40%	242 18.67%	1,296 100%
12	**389** **30.56%**	101 7.93%	189 14.85%	390 30.64%	204 16.02%	1,273 100%
Total:	**3,384** **31.80%**	763 7.17%	1,226 11.52%	3,205 30.12%	2,062 19.38%	10,640 100%

Table 2 (continued)

Island of Hawai'i

Grade	**Hawaiian**	Filipino	Japanese	Caucasian	Other	Total
5	**646**	246	285	499	183	1,859
	34.75%	13.23%	15.33%	26.84%	9.84%	100%
6	**664**	288	269	468	181	1,870
	35.51%	15.40%	14.39%	25.03%	9.68%	100%
7	**605**	265	260	454	190	1,774
	34.10%	14.94%	14.66%	25.59%	10.71%	100%
8	**502**	240	228	445	156	1,571
	31.95%	15.28%	14.51%	28.33%	9.93%	100%
9	**562**	264	277	436	161	1,700
	33.06%	15.53%	16.29%	25.65%	9.47%	100%
10	**483**	266	233	434	138	1,554
	31.08%	17.12%	14.99%	27.93%	8.88%	100%
11	**452**	244	290	417	131	1,534
	29.47%	15.91%	18.90%	27.18%	8.54%	100%
12	**386**	263	262	358	117	1,386
	27.85%	18.98%	18.90%	25.83%	8.44%	100%
Total:	**4,300**	2,076	2,104	3,511	1,257	13,248
	32.46%	15.67%	15.88%	26.50%	9.49%	100%

Table 2 (continued)

Islands of Maui, Moloka'i, & Lana'i

Grade	**Hawaiian**	Filipino	Japanese	Caucasian	Other	Total
5	**326**	289	144	336	174	1,269
	25.69%	22.77%	11.35%	26.48%	13.71%	100%
6	**352**	290	158	329	160	1,289
	27.31%	22.50%	12.26%	25.52%	12.41%	100%
7	**343**	298	156	282	179	1,258
	27.27%	23.69%	12.40%	22.42%	14.23%	100%
8	**344**	306	133	277	121	1,181
	29.13%	25.91%	11.26%	23.45%	10.25%	100%
9	**359**	309	153	293	149	1,263
	28.42%	24.47%	12.11%	23.20%	11.80%	100%
10	**313**	318	144	257	108	1,140
	27.46%	27.89%	12.63%	22.54%	9.47%	100%
11	**271**	348	159	267	86	1,131
	23.96%	30.77%	14.06%	23.61%	7.61%	100%
12	**263**	312	184	199	81	1,039
	25.31%	30.03%	17.71%	19.15%	7.80%	100%
Total:	**2,571**	2,470	1,231	2,240	1,058	9,570
	26.87%	25.81%	12.86%	23.41%	11.06%	100%

Table 2 (continued)

Island of Kaua'i

Grade	**Hawaiian**	Filipino	Japanese	Caucasian	Other	Total
5	**179**	176	101	161	105	722
	24.79%	24.38%	13.99%	22.30%	14.55%	100%
6	**164**	183	85	139	94	665
	24.66%	27.52%	12.78%	20.90%	14.13%	100%
7	**132**	211	105	163	76	687
	19.21%	30.71%	15.28%	23.73%	11.06%	100%
8	**168**	178	74	144	71	635
	26.46%	28.03%	11.65%	22.68%	11.18%	100%
9	**135**	201	87	148	57	628
	21.50%	32.01%	13.85%	23.57%	9.08%	100%
10	**131**	223	99	145	51	649
	20.18%	34.36%	15.25%	22.34%	7.86%	100%
11	**145**	223	111	155	56	690
	21.01%	32.32%	16.09%	22.46%	8.11%	100%
12	**121**	249	97	134	49	650
	18.62%	38.31%	14.92%	20.62%	7.54%	100%
Total:	**1,175**	1,644	759	1,189	559	5,326
	22.06%	30.87%	14.25%	22.32%	10.50%	100%

Source: Hawai'i Department of Education; analysis of data tapes provided by the Office of Program Evaluation & Planning, the Kamehameha Schools/Bishop Estate, November 1989

Table 3

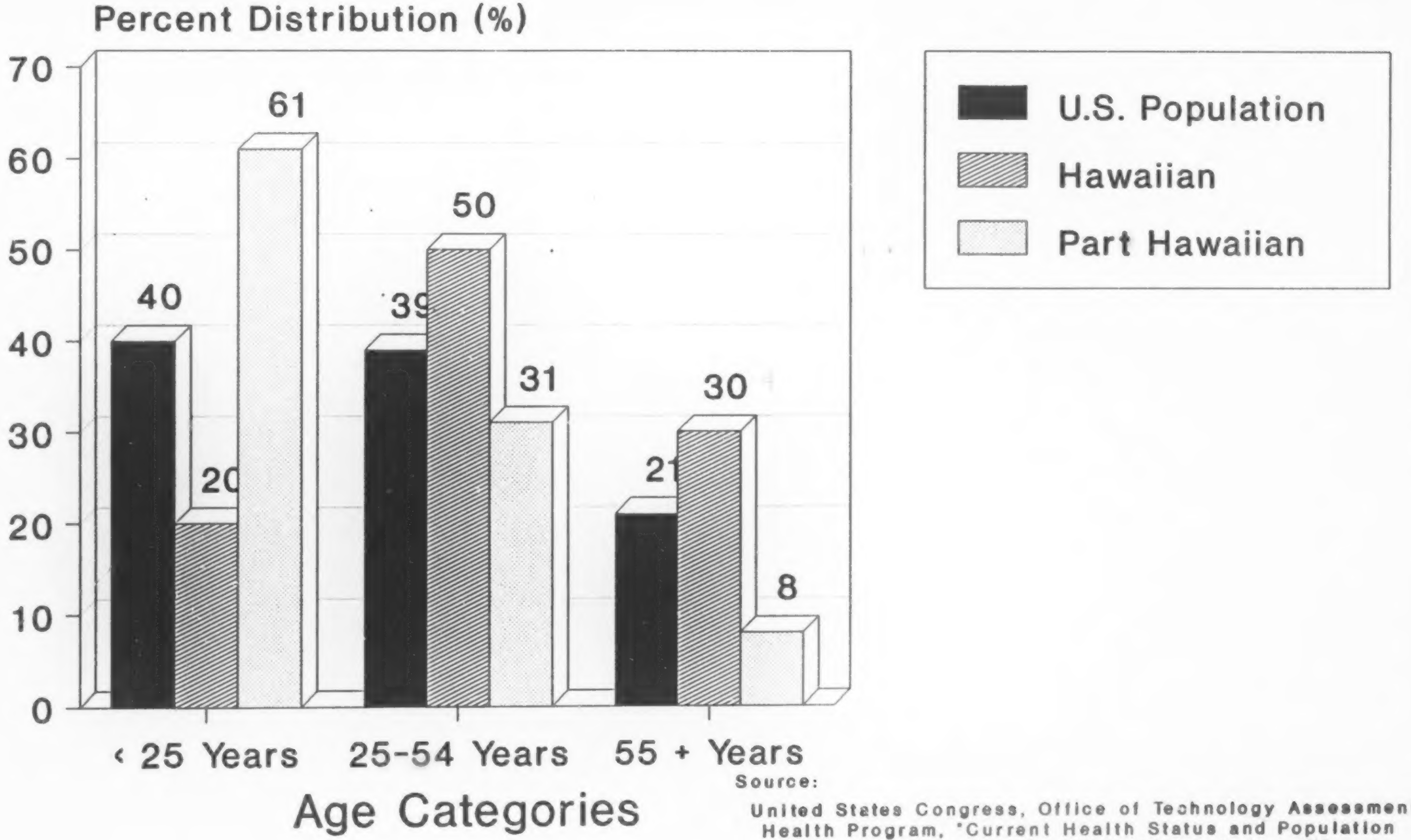
Stanford Achievement Test (SAT) Scores by Percent of Students in Low, Medium, & High Stanines: Statewide versus Native Hawaiians, Grades 6, 8, & 10, 1987-1988

		Statewide	Native Hawaiian
Grade 6:			
Math:	Low	18.89	25.53
	Medium	45.91	50.85
	High	35.20	22.62
Reading:	Low	20.90	28.15
	Medium	56.56	60.13
	High	22.54	11.73
Grade 8:			
Math:	Low	27.92	39.91
	Medium	47.62	50.11
	High	24.46	9.98
Reading:	Low	25.15	33.66
	Medium	54.24	57.66
	High	20.61	8.67
Grade 10:			
Math:	Low	22.52	36.08
	Medium	49.34	53.12
	High	28.13	10.81
Reading:	Low	24.61	33.85
	Medium	59.48	60.38
	High	15.91	5.77

Source: Hawai'i Department of Education; analysis of data tapes provided by the Office of Program Evaluation & Planning, the Kamehameha Schools/Bishop Estate, November 1989

Figure 1

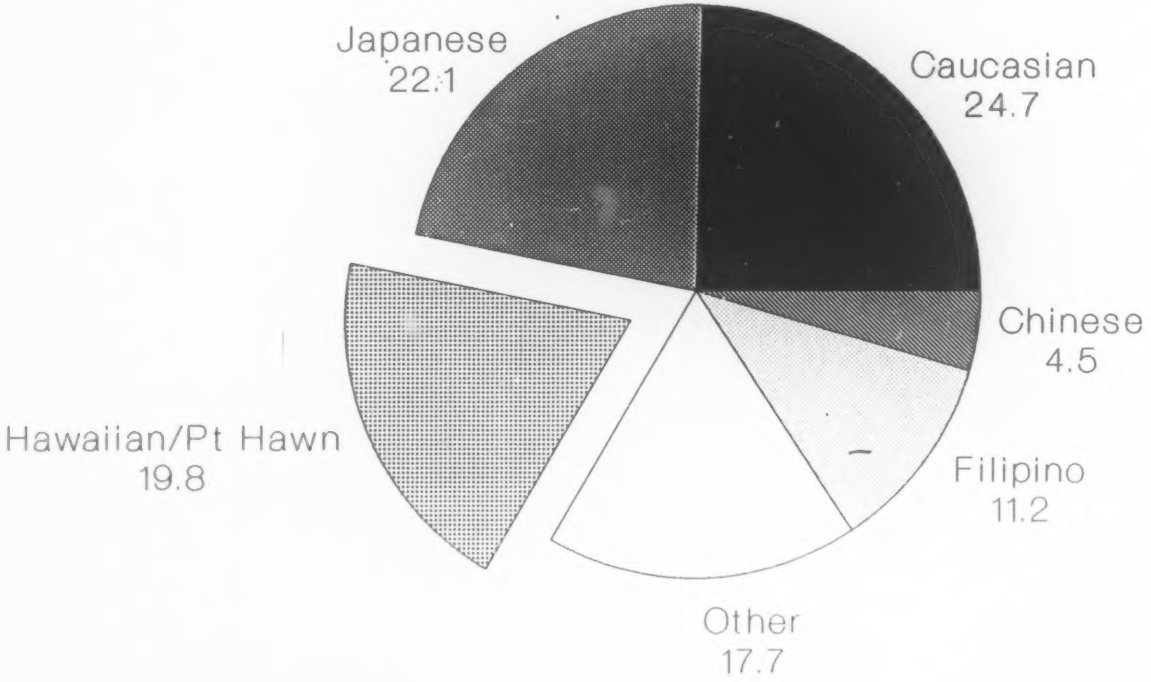
Age Distribution
Comparison U.S., Hawaiian, and Part Hawn



Source:
United States Congress, Office of Technology Assessment, Health Program, "Current Health Status and Population Projections of Native Hawaiians Living in Hawaii", Washington D.C., April 1987.

Figure 2

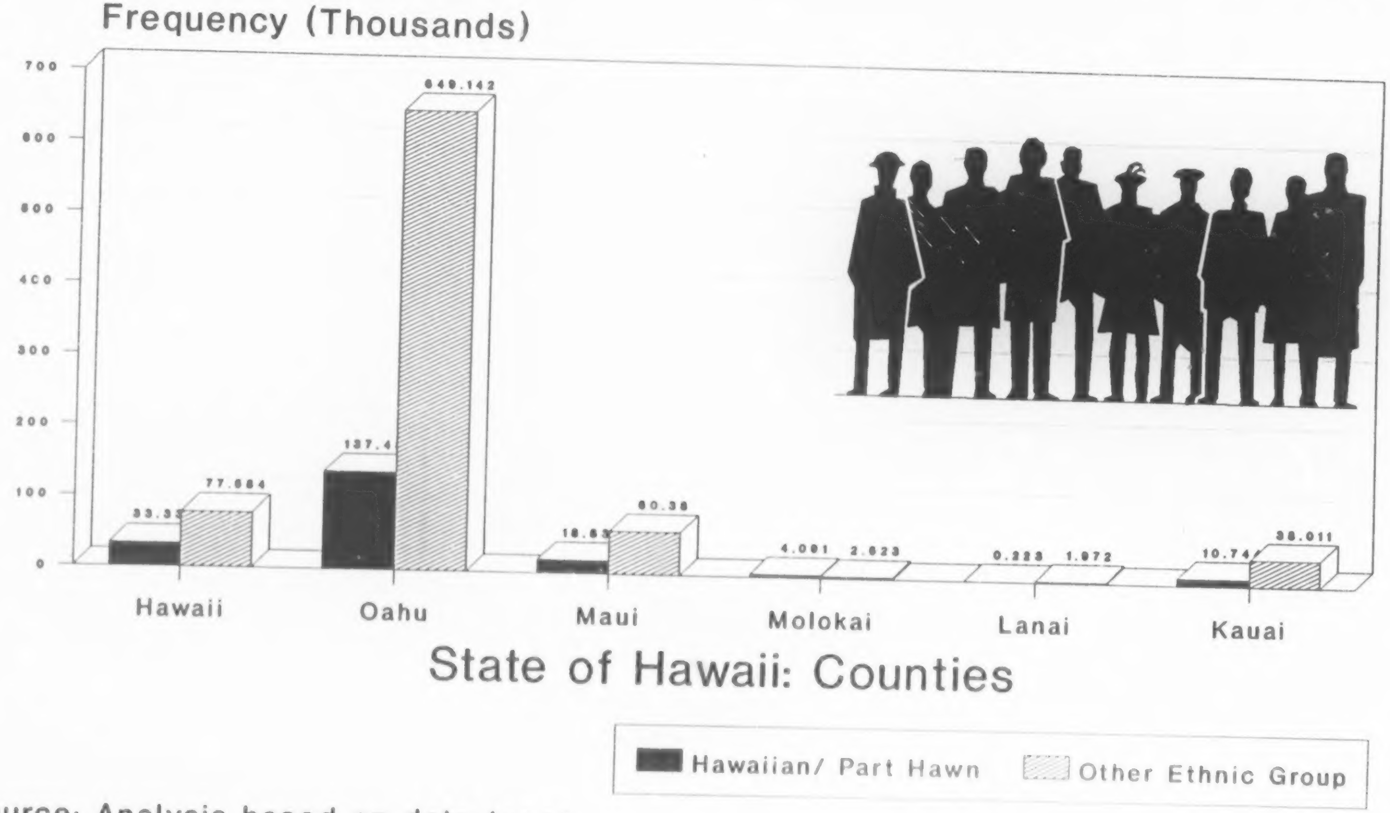
STATE OF HAWAII, 1986
Ethnic Percentage Distribution



Source: Analysis based on data tapes provided by the Health Surveillance Prog., Hawaii Dept. of Health, 11/89

Figure 3

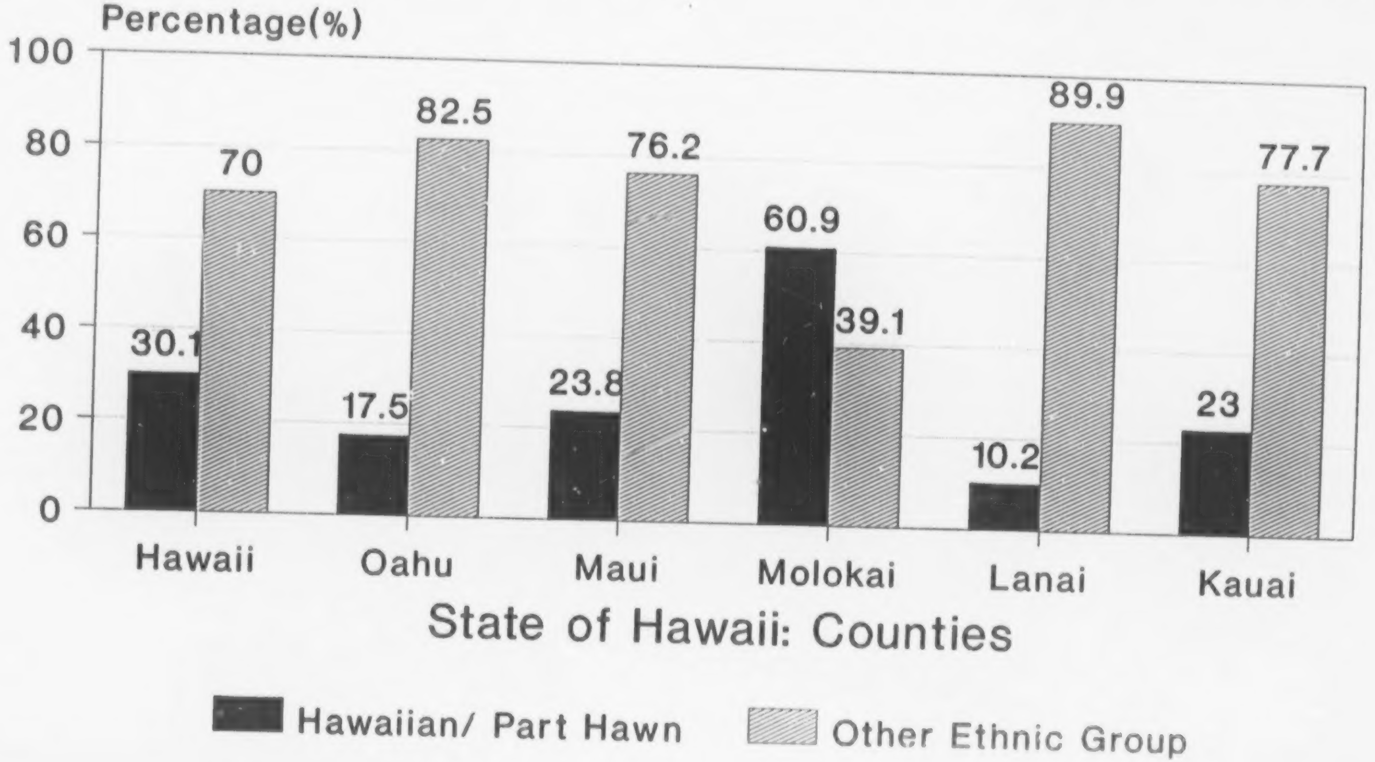
State of Hawaii, 1986
Native Hawaiians vs Other Ethnic Groups



Source: Analysis based on data tapes
provided by the Health Surveillance
Prog., Hawaii Dept. of Health, 11/89

Figure 4

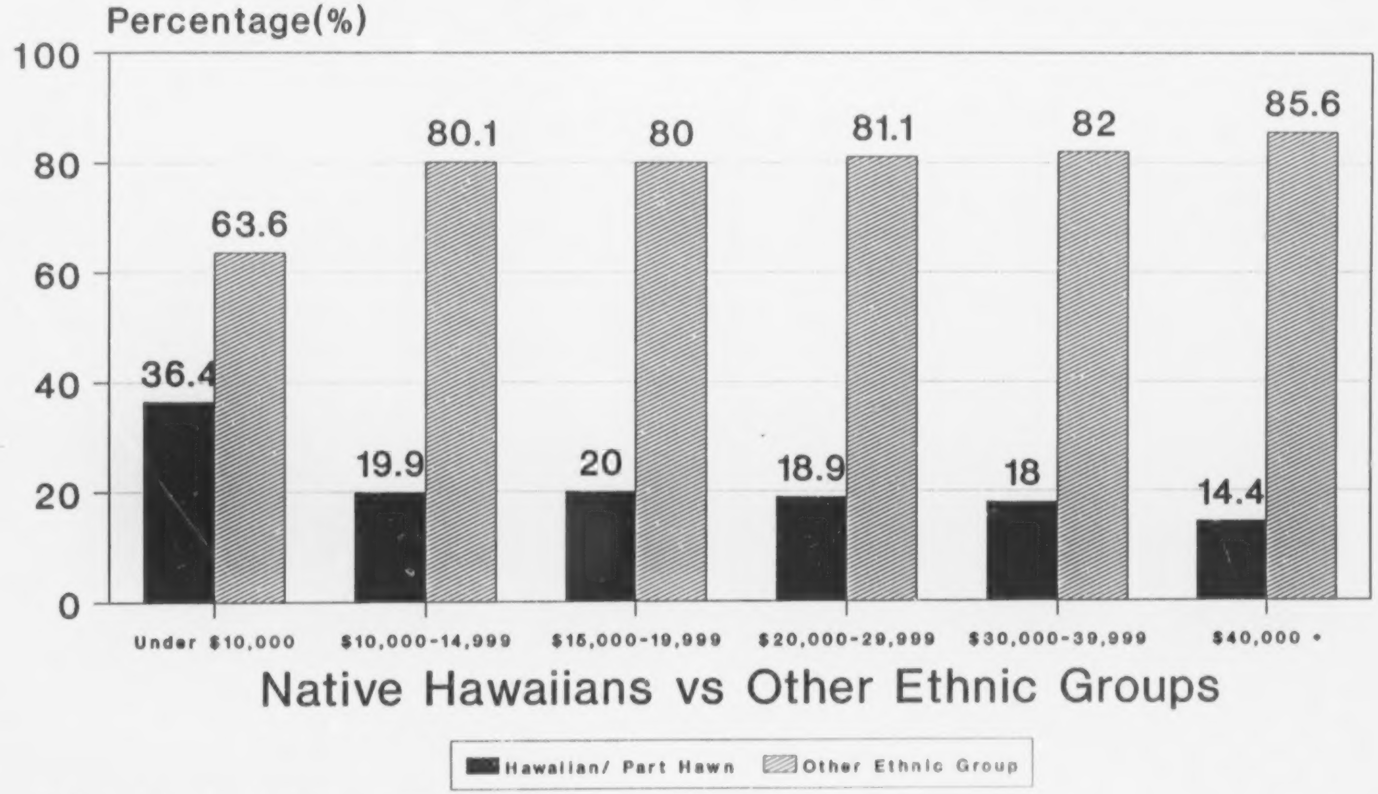
State of Hawaii, 1986
Native Hawaiians vs Other Ethnic Groups



Source: Analysis based on data tapes provided by the Health Surveillance Prog., Hawaii Dept. of Health, 11/89

Figure 5

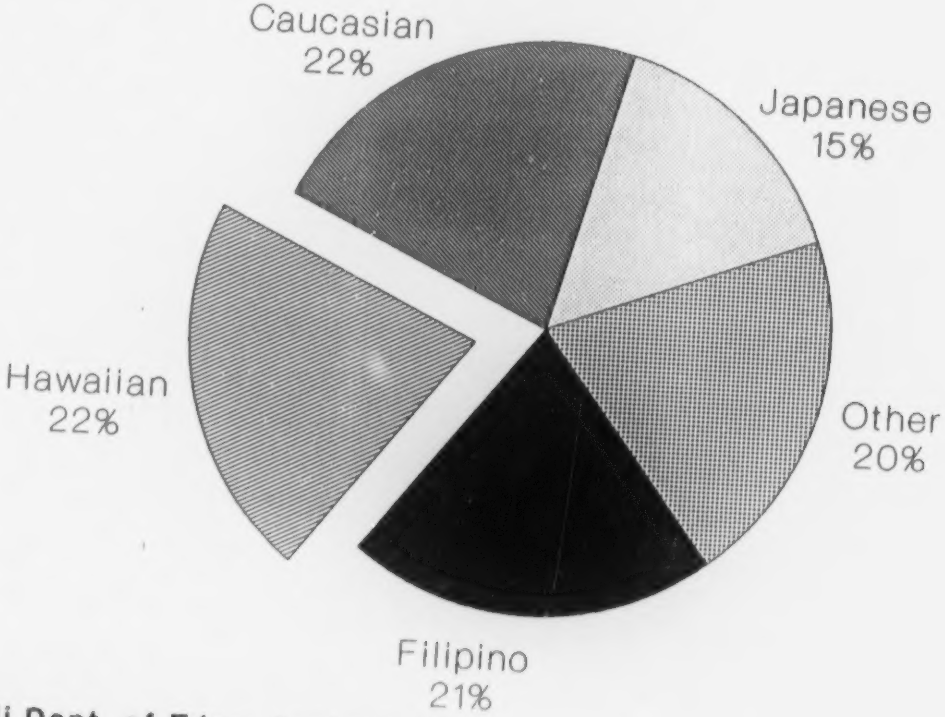
State of Hawaii, 1986
Family Yearly Gross Income



Source: Analysis based on data tapes
provided by the Health Surveillance
Prog., Hawaii Dept. of Health, 11/89

Figure 6

State of Hawaii
Public School Students by Ethnicity
(Grades 5 - 12)



Source: Hawaii Dept. of Educ; Analysis provided by the Office of Program Eval. & Planning; Kamehameha Schools/BE, 11/89

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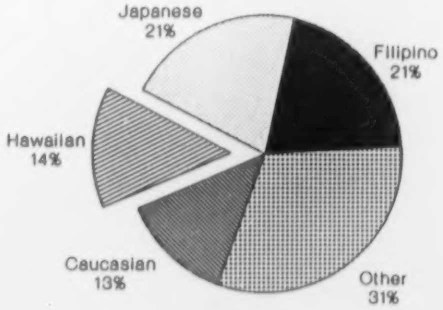
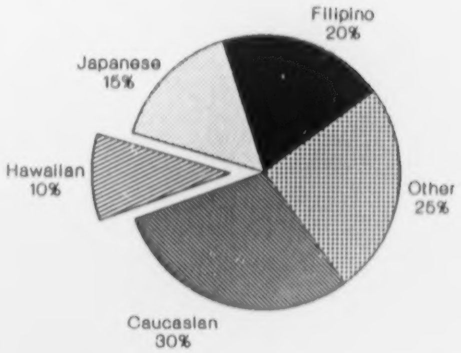
Figure 6

ISLAND OF OAHU

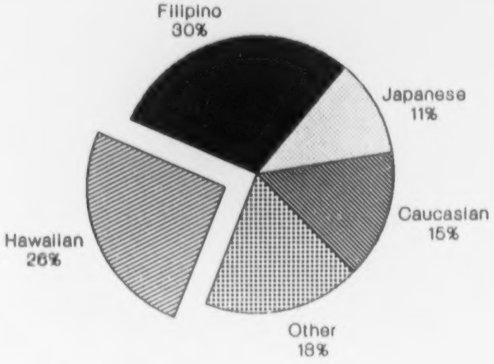
Honolulu District



Central District



Leeward District



Windward District

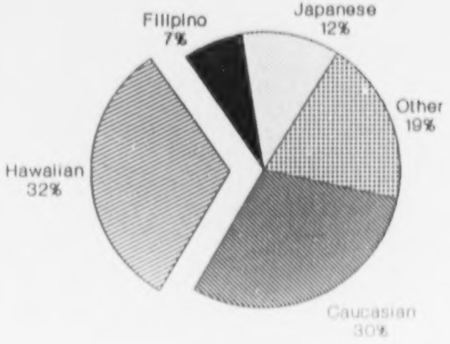


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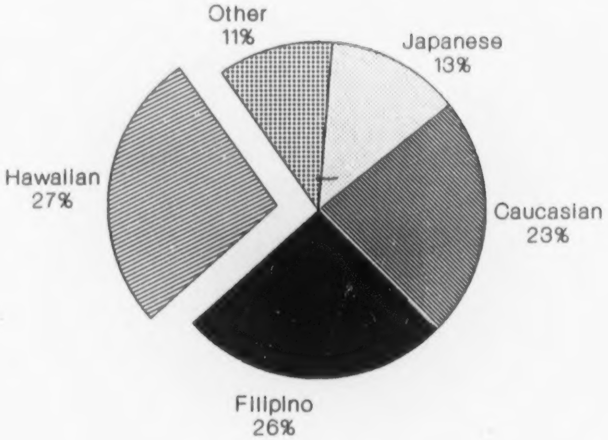
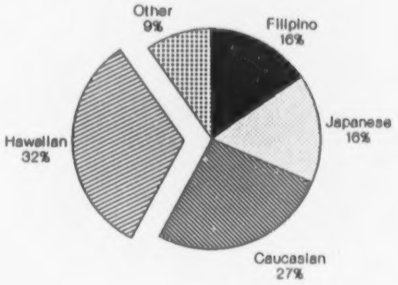
Figure 6

NEIGHBOR ISLANDS

Maui County



Hawaii County



Kauai County

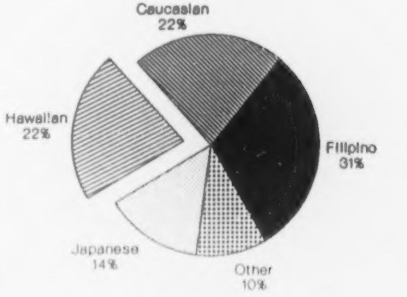
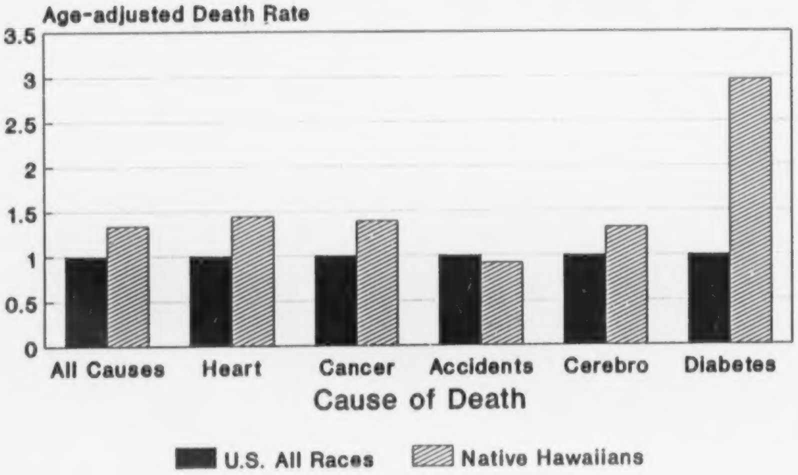
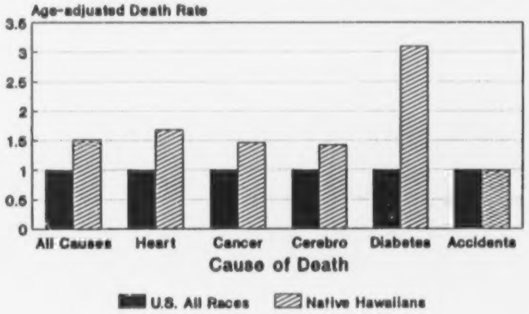


Figure 7

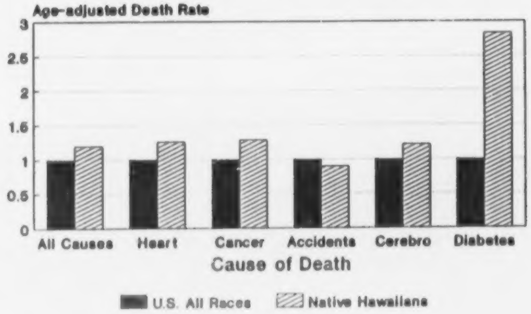
Mortality: Both Sexes
Native Hawaiians vs U.S. All Races



Mortality: Females
Native Hawaiians vs U.S. All Races



Mortality: Males
Native Hawaiians vs U.S. All Races

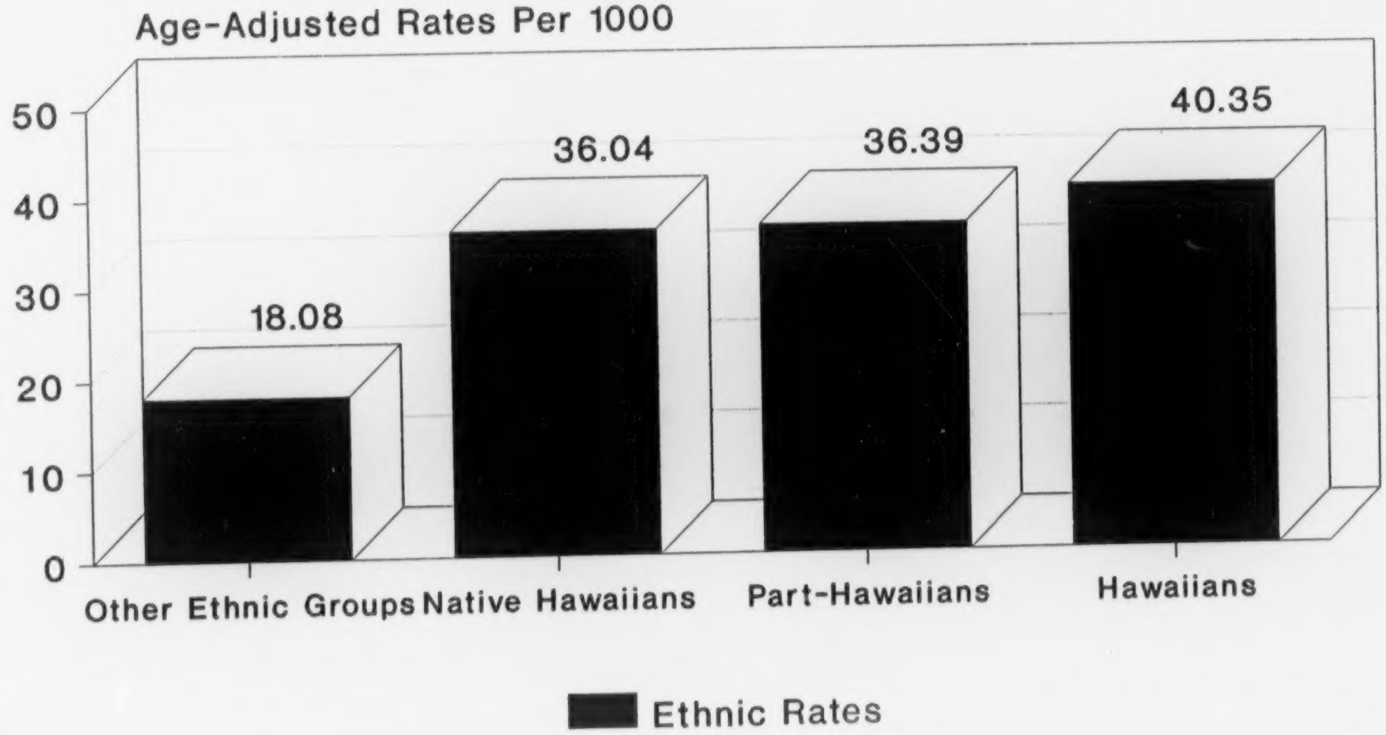


Source:
United States Congress, Office of Technology Assessment, Health Program, "Current Health Status and Population Projections of Native Hawaiians Living in Hawaii", Washington D.C., April 1987.

Figure 8

State of Hawaii: 1986

Age-Adjusted Prevalence of Diabetes

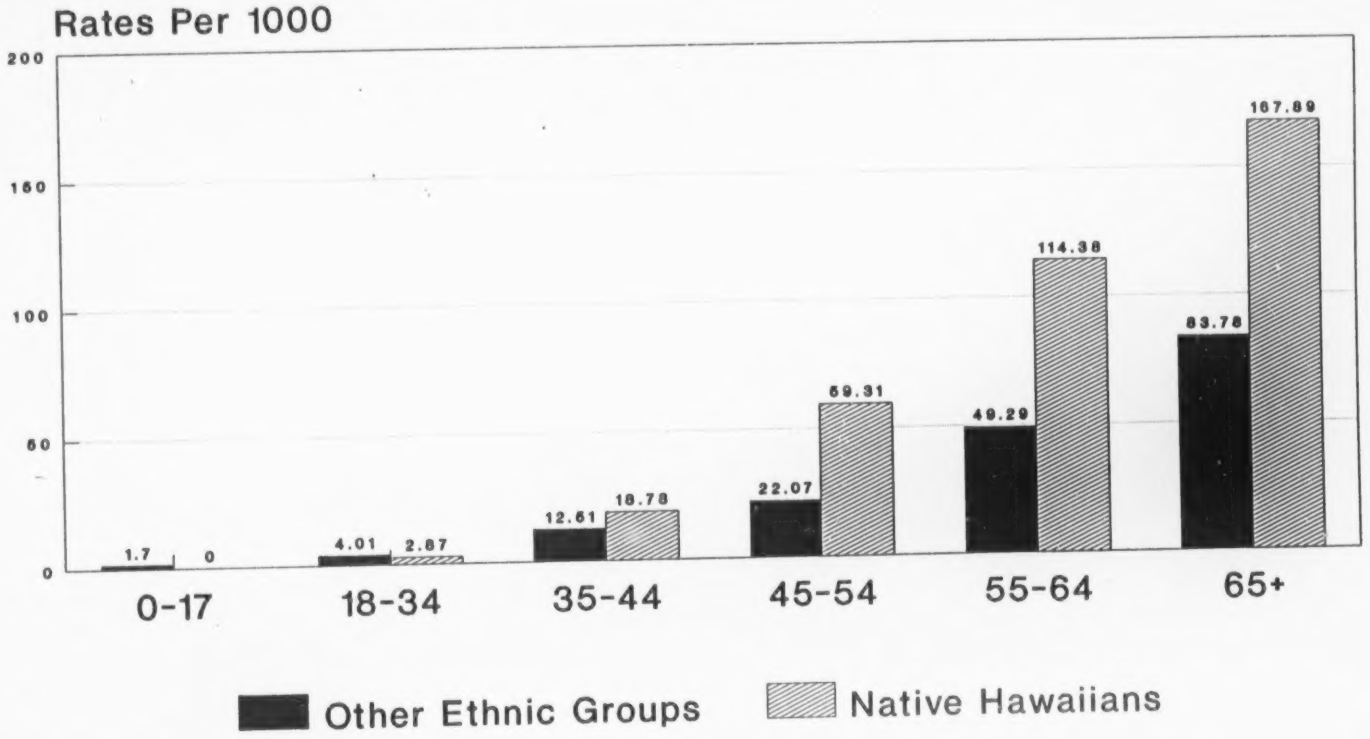


Source: Analysis based on data tapes
provided by the Health Surveillance
Prog., Hawaii Dept. of Health, 11/89

Figure 9

State of Hawaii: 1986

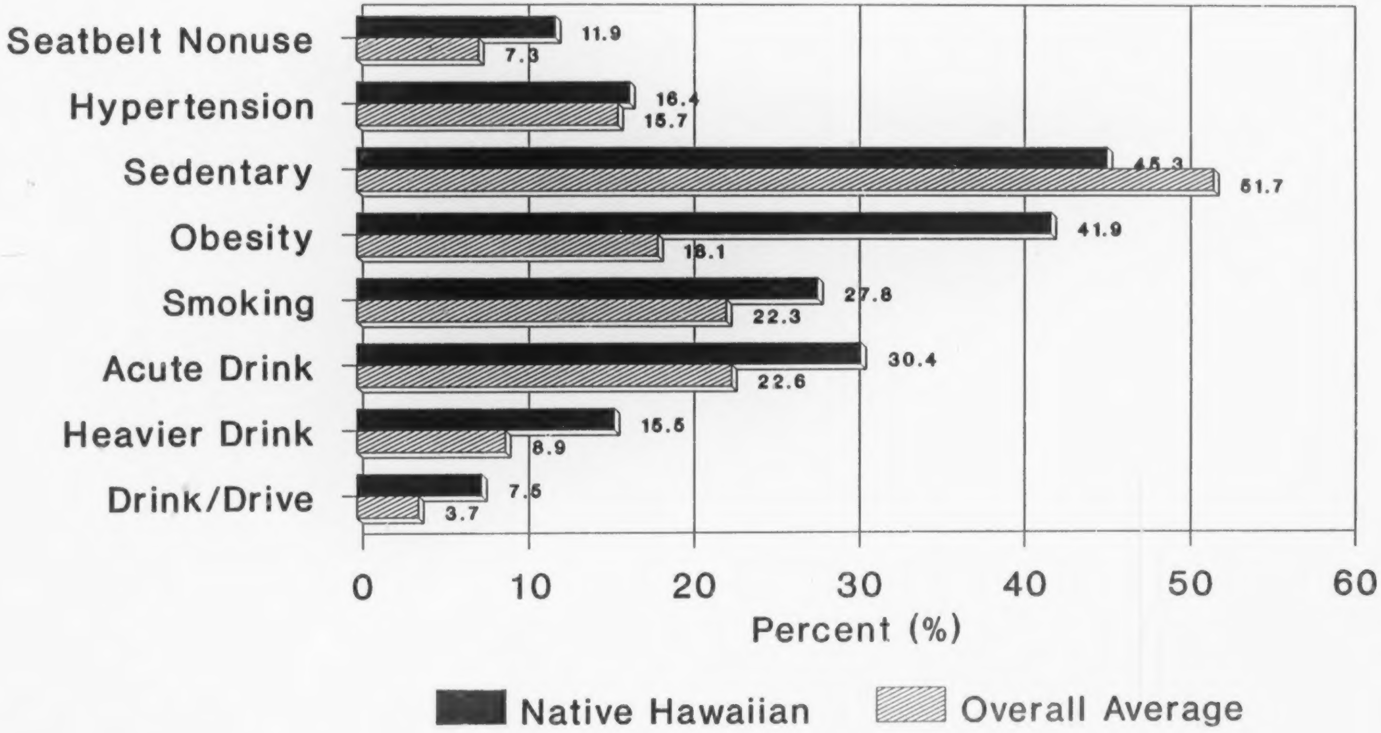
Prevalence of Diabetes by Age Groups



Source: Analysis based on data tapes
provided by the Health Surveillance
Prog., Hawaii Dept. of Health, 11/89

Figure 10

Selected Behavioral Risk Factors
Morbidity and Mortality



Source: State Department of Health
Health Promotion and Education Office
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APPENDIX A:

PUBLIC LAW 100-579:

NATIVE HAWAIIAN HEALTH CARE ACT OF 1988

NATIVE HAWAIIAN HEALTH CARE ACT

UNDER PUBLIC LAW 100-579, THE NATIVE HAWAIIAN HEALTH CARE ACT OF 1988, HEALTH CARE SYSTEMS WILL BE ESTABLISHED TO PROVIDE HEALTH PROMOTION, DISEASE PREVENTION, AND PRIMARY HEALTH SERVICES TO NATIVE HAWAIIANS. IN ESTABLISHING THESE SYSTEMS, PREFERENCE IS GIVEN TO NATIVE HAWAIIAN HEALTH CENTERS AND NATIVE HAWAIIAN ORGANIZATIONS.

UP TO NINE (9) SYSTEMS ARE AUTHORIZED:

TWO ON KAUA'I, INCLUDING NI'IHAU;
TWO ON O'AHU;
ONE ON MOLOKA'I, INCLUDING LANA'I;
TWO ON MAUI; AND
TWO ON HAWAI'I.

PLANNING BEGINS IN FISCAL YEAR 1990 (BEGINNING IN OCTOBER 1989), AND THE SYSTEMS START TO BE ESTABLISHED IN FISCAL YEAR 1991 (BEGINNING IN OCTOBER 1990).

Provider Organizations

The following services must be provided:

a. outreach services to inform Native Hawaiians of the availability of health services;

b. education in health promotion and disease prevention of the Native Hawaiian population by (wherever possible) Native Hawaiian health care practitioners, community outreach workers, counselors, and cultural educators;

c. services of physicians, physicians' assistants, or nurse practitioners;

d. immunizations;

e. prevention and control of diabetes, high blood pressure, and otitis media;

f. pregnancy and infant care; and

g. improvement of nutrition.

The following services may be provided:

a. other services within the meaning of the terms "health promotion", "disease prevention", and "primary health services", as defined below;

b. provision of such health care services by traditional Native Hawaiian healers;

c. identification, treatment, control, and reduction of the incidence of preventable illnesses and conditions endemic to Native Hawaiians; and

d. collection of data related to prevention of diseases and illnesses among Native Hawaiians.

Providers must meet the following conditions:

a. Clients with limited ability to speak the English language. If a substantial portion of the population of Native Hawaiians to be served has a limited ability to speak the English language, the provider must develop and have the ability to carry out a reasonable plan to provide health services under the grant or contract through individuals who are able to communicate with the population involved in the language and cultural context that is most appropriate. At least one individual must be designated, who is fluent in both English and the appropriate language, to assist in carrying out the plan.

b. Matching funds. Federal funds will not be provided in an amount exceeding 75 percent of the costs of providing health services under the grant or contract. The provider must contribute, directly or through donations, non-federal contributions in an amount equal to not less than $1 for each $3 of federal funds provided through the grant or contract. Non-federal contributions may be in cash or in kind, fairly evaluated, including plant, equipment, or services. Amounts provided by the federl government or services assisted or subsidized to any significant extent by the federal government may not be included in determining the amount of such non-federal contributions. This requirement may be waived if the provider is nonprofit-private and the Secretary of DHHS, in consultation with Papa Ola Lokahi, determines that compliance with the matching fund requirement is not feasible.

c. Restrictions on use of funds. Funds may not be used to provide inpatient services; to make cash payments to intended recipients of health services; to purchase or improve real property (other than minor remodeling of existing improvements in real property) or to purchase major medical equipment; or for any purpose other than the required and optional services identified above.

d. Charges for services. Health services under the grant or contract will be provided without regard of ability to pay; but a charge will be imposed, adjusted to reflect the income of the individual involved and according to a schedule of charges that is made available to the public.

e. Administrative expenses. Not more than 10 percent of amounts received may be used for the purpose of administering the grant or contract.

f. other administrative requirements: fiscal control and accountability; confidentiality of records; relationship to Medicaid; annual report.

Papa Ola Lokahi

The Act also creates Papa Ola Lokahi, an organization composed of:

a. E Ola Mau, an organization of Native Hawaiian health professionals;

b. the Office of Hawaiian Affairs of the State of Hawaii;

c. Alu Like, Inc., a Native Hawaiian service and training organization;

d. the University of Hawaii; and

e. the Office of Hawaiian Health of the Hawaii State Department of Health.

Papa Ola Lokahi's mission is to:

a. develop the health care master plan designed to promote comprehensive health promotion and disease prevention services and to maintain and improve the health status of Native Hawaiians, based upon assessments of their health care status and health care needs;

b. plan the Native Hawaiian health centers for each of the islands;

c. recognize and certify Native Hawaiian organizations seeking to provide health services under the Act, as having the qualifications and capacity to provide the services, and meet the requirements, under the contract or grant the organization receives from the federal government;

d. provide consultation to the federal Department of Health and Human Services (DHHS) when DHHS makes grants to, or enters into contracts with, organizations seeking to provide health services under the Act;

e. coordinate, implement, and update the activities identified in the master plan;

f. train Native Hawaiian health care practitioners, community outreach workers, counselors, and cultural educators in health promotion and disease prevention activities; and

g. identify and conduct research into diseases that are most prevalent among Native Hawaiians, including behavioral, biomedical, epidemiological, and health services.

Definitions

Native Hawaiian means any individual who has any ancestors that were natives, prior to 1778, of the area that is now the State of Hawaii as evidenced by:

a. genealogical records,
b. Kupuna (elders) or Kama'aina (long-term community residents) verification, or
c. birth records of the State of Hawaii.

Native Hawaiian Health Centers means an entity:

a. which is organized under the laws of the State of Hawaii,

b. which provides or arranges for health care services through practitioners licensed by the State of Hawaii, where licensure requirements are applicable,

c. which is a public or nonprofit private entity, and

d. in which Native Hawaiian health practitioners significantly participate in the planning, management, monitoring, and evaluation of health services.

Native Hawaiian Organization means any organization:

a. which serves the interests of Native Hawaiians,

b. which is recognized by Papa Ola Lokahi for the purpose of planning, conducting, or administering programs (or portions of programs) authorized under the Act for the benefit of Native Hawaiians, and is certified by Papa Ola Lokahi as having the qualifications and capacity to provide the services, and meet the requirements, under the contract the organization enters into with, or grant the organization receives from the federal Department of Health and Human Services under the Act,

c. in which Native Hawaiian health practitioners significantly participate in the planning, management, monitoring, and evaluation of health services, and

d. which is a public or nonprofit-private entity.

Traditional Native Hawaiian Healer means a practitioner:

a. who is of Hawaiian ancestry and has the knowledge, skills, and experience in direct personal health care of individuals, and

b. whose knowledge, skills, and experience are based on a demonstrated learning of Native Hawaiian healing practices acquired by direct practical association with Native Hawaiian elders, and oral traditions transmitted from generation to generation.

Disease Prevention includes:

a. immunizations,
b. control of high blood pressure,
c. control of sexually transmittable diseases,
d. prevention and control of diabetes,
e. control of toxic agents,
f. occupational safety and health,
g. accident prevention,
h. fluoridation of water,
i. control of infectious agents, and
j. provision of mental health care.

Health Promotion includes:

a. pregnancy and infant care, including prevention of fetal alcohol syndrome,

b. cessation of tobacco smoking,

c. reduction in the misuse of alcohol and drugs,

d. improvement of nutrition,

e. improvement in physical fitness,

f. family planning, and

g. control of stress.

Primary Health Services means:

a. services of physicians, physicians' assistants and nurse practitioners;

b. diagnostic laboratory and radiologic services;

c. preventive health services (including children's eye and ear examinations to determine the need for vision and hearing correction, perinatal services, well child services, and family planning services);

d. emergency medical services;

e. transportation services as required for adequate patient care;

f. preventive dental services; and

g. pharmaceutical services, as may be appropriate for particular health centers.

APPENDIX B:

RECOMMENDATIONS OF THE 1986 CHILD AND ADOLESCENT SERVICE SYSTEMS NEEDS ASSESSMENT

Recommendation 1: That all public and private child-serving agencies, along with children's advocates and families of children, take responsibility to educate the public and its elected representatives about the overwhelming unmet need for mental health services for Hawai'i's youth. These agencies must work cooperatively to meet these complex and unmet needs.

Recommendation 2: That State level efforts to provide meaningful information, consultation and technical assistance for planning and needs assessment both within and across agencies and systems be enhanced.

Recommendation 3: That least restrictive and intermediate level care by developed at the community level and that all components of the system of care be available to those in need. That the Leahi A & B psychiatric hospital (note: this is a State facility operated by the Department of Health) unit for children be expanded to a 7 days/week program.

Recommendation 4: That a clear and implementable standard be established to facilitate the movement of a child into and out of various levels of care. This would insure that before a youth is placed in a highly restrictive setting, all less restrictive alternatives have been ruled out. Incentives need to be in place to insure that at the point of discharge, there is continuity in movement from one level of care to another.

Recommendation 5: That efforts be made to develop effective advocates for children and adolescents. These efforts should include professionals, parents and youth. Advocacy which addresses only simple and specific needs of these youth often leads to fragmented and ineffective services. Youth issues are not narrow or parochial. An effective children's lobby must develop in Hawai'i. It is appropriate that all child-serving agencies treat this multi-system advocacy effort as a priority.

Recommendation 6: That an interagency task force evaluates and works to change existing fiscal standards to increase potential reimbursement for services to children and adolescents and their families. In addition, all efforts should be made to accredit existing programs.

Recommendation 7: That interagency coordination take place on two additional levels. First, intersystem/interagency case managers need to be identified for youth deeply involved in these systems. Second, all agencies must begin to develop mechanisms to more readily share information about these youth.

Recommendation 8: A common format for Request for Proposals (RFPs) should be developed by the major governmental agencies serving youth. This format should then be used by all of these agencies in developing and publishing the RFPs. These RFPs should be entered into an integrated computer database that will permit searching by potential vendors of services. This database should be made available on all islands in the State. It could also be time- and cost-saving to have the RFPs in their complete form available by computer to allow for real-time revision capability.

Recommendation 9: That a public priority should be to develop effective strategies to improve the functioning of families. Interagency cooperation, changes in fiscal policies, new programs and new training must accommodate family-level interventions. In addition, local parent-advocacy groups need to be developed and nurtured.

Recommendation 10: That mental health services for youth from nondominant cultures be focused on interventions that encompass an ecological approach. Strong links between child-serving agencies and family and community groups need to be made. Providers should be trained in ethno-cultural issues (including possible requirements for certification or the establishment of minimum levels of competence for all State-funded Purchase of Service contract recipients). Finally, ethno-cultural research concerning mental health and related problems of these youth should be encouraged.

Recommendation 11: That an independent examination of how the mental health needs of school children in Hawai'i are being met be conducted. Given existing and foreseeable limitations of resources, a creative and accountable system which encompasses prevention, early identification and treatment outcomes should be considered.

Recommendation 12: That appropriate agencies work together to develop a priority for community-based intermediate level programs, including day treatment, therapeutic foster care, and in-home intensive family services.

Recommendation 13: That additional creative programs for child abuse and neglect, person abuse and sustance abuse, be developed. These programs in particular must be ethno-culturally compatible and coordinated within all relevant systems. Both prevention and treatment services are needed. The mental health needs of abused youth must be identified and treated more quickly.

Recommendation 14: That the Mental Health Division and other relevant agencies develop, publicize and integrate programs which quickly and effectively intervene when families and children are in crisis.

Recommendation 15: An intensive case-tracking retrospective and/or prospective study to examine the systems involvement of these children and adolescents should be conducted. This study should be planned and funded cooperatively by all child-serving agencies.

APPENDIX C:

THE NATIVE HAWAIIAN DRUG FREE SCHOOLS/COMMUNITIES PROGRAM

FACT SHEET: NATIVE HAWAIIAN DRUG FREE SCHOOLS/COMMUNITIES PROGRAM

WHAT IS THE PROBLEM?

There is significant evidence that alcoholism and drug abuse are widespread and serious problems at the local and national level. These problems impact directly on academic achievement, absenteeism, and the high dropout rate of our youth, including Native Hawaiian youth.

In addition, substance abuse and chemical dependency are problems which impact the larger community. Native Hawaiians are faced with many challenges including high rates of incarceration for drug and alcohol-related crimes, a high proportion of alcohol and drug-related sickness, and a high prevalence of depression, which is often linked to substance abuse and chemical dependency. Furthermore, Native Hawaiians are under-represented in those receiving treatment or health care services related to these issues.

WHAT IS THE NATIVE HAWAIIAN DRUG FREE SCHOOLS AND COMMUNITIES PROGRAM?

We are part of a national and local effort to assist schools, families and communities in developing substance abuse prevention programs and services. Federally funded by the U.S. Department of Education, we are initially a three year pilot grant charged with developing a K-12 curriculum, educational programs and materials, and resource and referral services which are appropriate for Native Hawaiian communities.

Because our funding is set-aside for Native Hawaiians, as long as there continues to be monies available to combat the substance abuse problem nationally there will be substance abuse prevention funds for Native Hawaiians. At this time, Governor John Waihee has designated the Kamehameha Schools/Bishop Estate as the administrator of these funds.

HOW ARE WE ACHIEVING OUR GOALS?

It was determined that an effective model would be to select a target school-community to develop and pilot curricula, programs and approaches. After meeting with school representatives and community leaders, the Nanakuli schools-community on the Waianae Coast of Oahu was selected to be the pilot site. An office was opened and we began offering prevention services in both the schools and community. Programs and approaches which are effective in Nanakuli will then be distributed and offered elsewhere in the State.

WHO IS RESPONSIBLE FOR ACHIEVING THESE GOALS?

It is the philosophy of the Native Hawaiian Drug Free Schools/Communities Program that if there are problems in any given community then the solutions are also in that community. This is true for the Native Hawaiian community as a whole. Our program provides trained and experienced staff in the fields of substance abuse prevention and treatment, community development and education. We believe that by working with schools, community members, parents and youth themselves, together we can develop approaches which can address the serious and life-threatening reality of substance abuse.

HOW CAN I LEARN MORE?

We have two offices. Both are equipped with resource libraries to provide information regarding issues related to substance abuse.

1850 Makuakana Street, Bldg. B
Honolulu, HI 96817
(Phone: 842-5802)

87-2070 Farrington Hwy.
Waianae, HI 96792
(Phone: 668-1517)

We encourage people to stop by or call us. Our staff is available to provide assistance and additional information as needed.

WHO IS THE STAFF?

Terry Kelly, Program Administrator
Arapata McKay, Program Developer
Paula-Ann Burgess, Program Developer
Thia West, Program Developer-Disseminator
Claudine Lee, Clerk

We also work in conjunction with other programs and services of the Kamehameha Schools/Bishop Estate, the State Department of Education, Hawaiian groups and programs, human service agencies and other substance abuse prevention programs both locally and nationally.

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POVERTY AND ADOLESCENT HEALTH

Background Paper for United States Congress
Office of Technology Assessment's
Adolescent Health Project

Prepared Under Contract to the Carnegie
Council on Adolescent Development

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Poverty and Adolescent Health

LaRue Allen and C. M. Mitchell

How Many Adolescents Are Poor?

The number of adolescents in poverty is increasing (Blum, 1987), although statistics on the adolescent age group alone are difficult to find. In 1974, those in the entire age range of childhood--0 to 18--surpassed the aged as the poorest group of U.S. citizens, with a continuing decline in economic health since that time (Committee on Ways and Means, 1985). Presently, almost one of every five children in the U.S. lives below the national poverty level (Hamilton, 1988). In 1985, the actual number of poor children ages 0 to 18 was 13.8 million (Committee on Ways and Means, 1985). Geographically, nearly 30 percent of poor children live in rural areas, and 28 percent live in suburban areas (Bane & Ellwood, 1989). Children's chances of being poor vary by race, father's presence, and mother's marital status. Knowledge of the details of the sociodemographic composition of the population of poor children--and especially those in the adolescent years, ages 10 to 18--is an important ingredient for the development of sound interventions and public policies.

Minority children are disproportionately represented among the poor. for example, Black children under 18 years old made up 7 percent of the entire urban population in 1979; yet, they represented almost 20 percent of the poor in general, and were dramatically overrepresented among the persistent urban poor (32 percent) (Hamilton, 1988). Moreover, between 1969 and 1985, while poverty rates for White children increased more than 60 percent, Black children still experienced almost three times the rate of poverty that White children did in 1985. Poverty rates among Latino children increased more than 40 percent simply between 1979 and 1985 (Sandefur, 1988).

Between 1978 and 1983, poverty rates rose more rapidly in two-parent families than in female-headed families. Despite this, children in female-headed households were four times more likely to be poor as those with both a mother and a father in the home. Poverty rates were the highest among children whose mothers had never married. More than 70 percent of this group was poor, and represented fully one-eighth of the number of poor children.

Children without a working parent are almost guaranteed entrance into the ranks of the poor, however, the presence of a working parent is no guarantee against poverty (Committee on Ways and Means, 1985). For Black children even the presence of two working parents is no guarantee against poverty. Black children in this family constellation are more likely to be poor than White children with only a father in the workforce.

Additional correlates of high rates of poverty that have implications for designing interventions and relevant public policies for adolescents include the age of the parent, age of the youngest child in the family, size of the family, and education of the parents. With regard to the first, age of parent, rates are twice as high when the mother is between 20 and 24 years old, as when she is between 40 and 44 years old, both in single- and two-parent families. In female-headed families where the youngest child is under 6, an adolescent would have a 19 percent higher chance of being poor than when no children under 6 are present. Adolescents from a family of five quadruple their chances of being poor when compared with youth from families with two or fewer children (Committee on Ways and Means, 1985).

Since the 1940s, a number of social programs have been put in place to try to buffer the impact of both sudden economic hardship and chronic unemployment--e.g., Aid to Families of Dependent Children (AFDC), Medicaid, food stamps, unemployment benefits. The existence of such programs makes it appear as if a "safety net" of social programs stretches below the families of unemployed workers in the U. S. As a result, many assume that true poverty is rare.

As is evident from the statistics cited above, such a perception is not simply incorrect, but misleading, and even dangerous. Drawing on information gathered during the recession of 1975, Moen (1983) examined the buffering ability of this alleged "safety net" on families living in poverty. She found that many unemployed workers were completely ineligible for benefits either because they were in occupations not covered by such programs (e.g., domestic work) or because they had exhausted their benefits prior to finding new employment. Overall, nearly half of all families with unemployed heads of household in 1975 received no income support from either AFDC or unemployment benefits. Obviously, exceedingly large gaps existed in this safety net of support for poor families.

Another important issue for program and policy development is the length of time poor children are actually poor. for the majority, poverty is a relatively short-term status. Two-thirds of all children who are ever poor during a 15 year period are poor for no more than four years (Committee on Ways and Means, 1985). However, one poor child in seven spends at least 10 of the 15 years in poverty, and have been called "persistently poor."

While children who experience short-term poverty are sociodemographically similar to the populations at large, persistently poor children are 90 percent Black, are likely to live in a female-headed household, and are disproportionately rural. An even smaller group of children (less that 9 percent of poor children in 1987 (Bane & Ellwood, 1989)) are members of "the underclass," a group characterized by low skills, long-term unemployment, engagement in deviant behavior, who live in areas with high concentrations of poverty (Wilson, 1987).

Why Are They Poor?

Hypotheses regarding the causes of poverty also have substantial influence on the development of effective programs and policies. As was indicated above, many of the American public believe that the "safety net" of social programs has "solved" the poverty problem in our country. Survey data collected in 1969, and again in 1980, showed that American also believe that opportunities for economic advancement are widely available, and that economic hardship is attributable to lack of effort or ability on the part

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of the individuals who are poor. The public believes that structural causes such as low wages or high rates of unemployment, are the least important causes of poverty (W. T. Grant Foundation Commission on Work, Family and Citizenship, 1988). Among researchers, the reign of cultural-deficit theories that focused on behavioral and psychological factors exclusively has been eclipsed only recently, by a recent shift toward focus on the degree to which structural factors--educational opportunities, access to employment--shape the rates of poverty (Danziger & Weinberg, 1986). The crucial structural factors differ depending upon family structure (Ellwood, 1988).

Among two-parent families, poverty is relatively short-term in duration, but important to understand because family stress and discord could lead to increased numbers of even higher risk, single-parent homes (Bane & Ellwood, 1989). Low wages, unemployment rates, and retirement and disability appear to be the leading structural causes of poverty (Ellwood, 1988).

In families with one parent, overwhelmingly often the mother as head of household, earning potential are low, child support payments from fathers are almost nonexistent, and benefits from public asistance programs are meager (Garfinkel & McLanahan, 1986). Poverty is likely to be longer lasting in these families both because of different rates of labor force participation and lower wages. These opportunity structure factors, for example, wages and employment status, vary sharply by race and ethnicity (Baca Zinn, 1989). Marriage, as an opportunity for economic advancement, is

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said tao be sharply less available to Blacks than to Whites (Wilson, 1987). For the alarmingly swift rising poverty among Latinos, it appears that regional economic conditions (e.g. farming conditions or unemployment in the rustbelt) are more important in predicting poverty than national trends (Baca Zinn, 1989).

Defining and Measuring Poverty

The official poverty level is based on estimates of the dollar amount needed to purchase minimum nutritional requirements, and is adjusted for family size and inflation, but not for the country's increasing standard of living (Schiller, 1980). Being below the poverty level means that, at least in the parts of the country with the lowest costs of living, a family should be able to purchase a sanitary dwelling, and have sufficient food to keep the body minimally fueled and covered. The index is not corrected for the differences in cost between urban and rural areas, or for the large regional variation in costs. In 1987, the poverty level for a family of four was approximately $10,000, compared to a median income of $36,000 for a family of four (Bane & Ellwood, 1989).

In research on adolescent problem behaviors, the construct of poverty--in fact, that of economic resources and socioeconomic status (SES) in general--has been, by and large, ignored, despite its obvious and growing importance in the U. S. today. Mueller and Parcel (1981) reported that when SES was reported in the empirical literature, most researchers relied on "impressionistic criteria" (such as the apparent SES of the child's neighborhood or school) for determining a youth's SES. Rarely is the official

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poverty index invoked. Furthermore, Mitchell et. al. (in preparation) reviewed the literature concerning the etiology of adolescent delinquency and depression, noting that more than half of all studies reviewed reported no information about subjects" SES Consistent with Mueller and Parcel's findings, Mitchell et. al. reported that only about one quarter of the studies denoted a quantitative operationalization of this construct. Further, fewer than 20 percent of the studies contained a sufficiently large proportion of poor adolescents to permit meaningful analyses of poverty as an independent variable.

This glaring gap in the empirical literature has not emerged from mere oversight, however. Typically, when considered at all, economic resources have been operationalized as some kind of global score of socioeconomic status, using measures such as the Hollingshead-Redlich four-factor index (Hollingshead, 1975) or household prestige (Duncan, 1961; Nock & Rossi, 1979). However, both practical and conceptual problems exist with this common practice. For instance, these measures are too often designed for use with relatively traditional family structures. Thus, guidance in determining SES in non-traditional families--such as a single mother who cleans people's homes for cash and receives Welfare support as well--is difficult to find. A second practical problem arises from the reality that many youth do not know enough about the details of their parents' employment for accurate assessment. For example, a teen might know that her mother works in a bank, but we need to know whether she works there as a security guard, or a teller, or the President. In many instances, this lack of awareness can be painfully evident even for relatively common proxies of SES such as parents' educational levels.

Even when social class is part of any analysis, it tends to be conceptualized solely as a family-level construct. Yet, there are several reasons for believing that family SES may not adequately capture the various ways in which the class-based characteristics of an adolescent's social area can affect his or her behavior. It is not difficult to imagine how a young person's day-to-day socioeconomic status may differ from that of his or her parents. A teen's social class is a product of how his or her family background interacts with his or her position in school clique structures, neighborhood groups, and other subcultural "strata". Moreover, many of the problem behaviors discussed during adolescence occur at ages when youth are beginning to drift or pull away from their families toward their own social identities. Thus, the effects of family social class on individual adolescents' everyday social class are at the very least mediated by other elements in the youth's environment (Reinarman & Fagan, 1988).

What Are The General Effects of Poverty on Adolescents' Health?

In light of such serious increases in poverty among youth, it is important to understand the nature of the effects of this poverty. Research has frequently documented a relationship between economic hardship and aggregate measures of mental illness, such as adult suicide rates and mental hospital admissions (Aldwin & Revenson, 1986; Allen & Britt, 1983). In addition, community surveys have revealed a modest relationship between income and degree of reported happiness and life satisfaction, as well as a persistent link between relatively low social class status and psychopathology. In summarizing this literature, Horwitz (1984) noted that median rates of psychological disturbance for the lowest classes were over one third; for the highest social classes, less than 10 percent. Furthermore, those living in lower-class areas have been more likely to be involved in serious interpersonal violence, although the connection between poverty and other types of criminal activity has been less clear.

Clearly, poverty has been linked to negative outcomes in adult. In fact, though, economic hardships have their most devastating impact on families with children. For instance, economic loss often means that fewer resources are available to devote to the care and raising of children (Moen, 1983). Poverty can have indirect, although equally devastating effects on youth as well. For example, high schools with predominantly minority student bodies--a common occurrence in inner-city areas--generally have high proportions of low-income students. In the 1980s, strong relationship was found to exist between the racial/ethnic make-up of a school's student body, its level of poverty, and the quality of educational outcomes of its students (Orfield, 1988).

Beyond lower educational attainment, adolescents living in poverty are especially affected by the day-to-day stresses of their families' economic plight. In the 80s, poor youth had a very difficult time in moving into meaningful adult roles in the labor force, in light of extremely high unemployment rates for young people--particularly for minority youth. During the summer of 1988, unemployment rates rose from 12 to 13.8 percent for White teenagers, and from 28.4 to 32.4 percent for Black teenagers. As a result, adolescents have been burdened with adult concerns, but the nation leaves them no way to participate in effective solutions through gainful employment (W. T. Grant Foundation Commission on Work, Family and Citizenship, 1988).

Poverty can have more subtle effects on youth as well. Although little research has been conducted, economical hardships may increase adolescents' socioemotional impairment by increasing the rejecting behavior of their parents--especially that of fathers. The transition from childhood to adolescence can be a challenge for any child; couple with economic deprivation, the psychological costs of this transition were found to be especially strong for girls who lacked appropriate dress and material resources for dating (Elder et al., 1985). Furthermore, economic deprivation resulted in lowered respect for fathers and heightened dependence on peer groups for adolescent boys; adolescent girls experienced lowered feelings of self-admiration and lowered goal aspiration (Lempers et al., 1989).

Lempers et al. (1989) found that economic hardship also influenced children's depression-loneliness and their delinquency/drug use. In addition to a direct effect, economic hardship seemed to increase depression-loneliness through changes in parental nurturance and inconsistent parental discipline. Yet,

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only an indirect effect of economic hardship was found on children's delinquency/drug use--typically through hardship-induced increases in inconsistent parental discipline, which resulted in greater delinquent and drug-using behavior.

Finally, high rates of unemployment appear to create greater strain when families have fewer personal resources and can count on less institutional support in the way of local, state and federal programs. When this occurs, Moen (1983) suggested that family members tend to reduce goals they set for themselves. In part this is due to an increase in ambiguity and apprehension concerning the future. In fact, Elder (Elder et al., 1985) found that family income loss in the early 1980s appears to have lowered expectations for job success among adolescent girls.

With these limitations in mind--in definition, measurement and the sheer volume of relevant research--we now turn to a summary of data available on three areas: the relationship between poverty and a number of adolescent health problems; issues surrounding service delivery and utilization for adolescents living in poverty; and barriers such adolescents experience in attempting to utilize current services.

The organization of this review, as with the literature it is based upon, also reflects a common, but not necessarily true, assumption that problem and positive behaviors in adolescents are independent of each other. Consistent with this assumption, individual categories of adolescent behaviors are treated as distinct from one another. For instance, depression is

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conceptualized separately from delinquency, substance abuse, or adolescent pregnancy. As a result, adolescent problems are researched separately; similarly, they are served by different human service agencies. Yet as adolescents develop, they may fluctuate in their particular expressions of problem and positive behaviors: symptoms of underlying problems may vary with age and experiences, and spceific exhibitions of problem behaviors may be rather transitory. For example, a teenager may act out at one time by committing delinquent acts, but another time by having unprotected sexual intercourse.

POVERTY AND ADOLESCENT HEALTH PROBLEMS

There is abundant evidence that children and adolescents living in poverty suffer negative health effects (Miller & Coulter, 1984; Salisbury & Berg, 1969). This section discusses studies examining this topic. In addition, the relationship of income to access to health services is a close one, particularly in the United States where the majority of health services are not resilient to fluctuations in the nation's economy (Miller & Coulter, 1984). These issues are discussed in the following section, looking individually at nine areas: physical health, nutrition, dental health, injuries, adolescent pregnancy, mental illness and suicide, adolescent abuse, substance use and abuse, and delinquency.

Poverty and Physical Health

Information on health use from the 1980 National Medical Care Utilization and Expenditure Survey showed that rates of care use and patterns of expenditure for health care differed dramatically according to poverty status, among other differentiating factors (Butler et al., 1985). As a national probability sample of over 5,000 children and youth, this Survey yields estimates that are considered more reliable than those derived from smaller samples. One limitation of the data set, though, is that all information was based on parent reports of their children's behavior. Encouragingly, there was a relatively high average number of visits for health care among poor children. Despite this use, which was attributed to the advent of Medicaid, poor children had not achieved equality when the rates of visiting were adjusted for health care need and quality of care. When these adjustments are introduced, socioeconomically disadvantaged youth still tend to have fewer visits and receive less preventive care.

Included in the survey is one of the few examinations of insurance coverage which allows for determination of full-year vs. part-year coverage. About one third of children on public insurance were eligible for only part of the year, because of the degree to which the welfare population experiences turnover (Butler et al., 1985). Fully 33% of poor children, and 37% of the near-poor, did not have full-year health insurance coverage.

Walker and her colleagues (1982) asked youth in grades 9 through 12 in an inner-city high school about their health concerns and problems, health status, and utilization of health services. When compared to the responses of private high school students, socioeconomically disadvantaged adolescents had more health

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worries, a greater desire for more help with problems such as headaches, and social problems such as racial discrimination and relationships with parents. In indicating which of a list of 22 health problems they would seek help for, socioeconomically disadvantaged youth ranked dental problems, acne, and health worries highest; private school youth were most likely to seek help for depression-sadness, tiredness, and acne. Given the parallels of these findings to those from a tri-ethnic study of youth in Galveston (Parcel, Nader & Meyer, 1977), the authors suggested that socioeconomic factors may be more important in determining health needs and perceptions than geography. The differences between the poor and nonpoor youth in health needs have clear implications for design and delivery of services for poor youth.

Among disadvantaged Indian and Mexican American youth in the southwest, use of health care services was not determined by economic factors alone; in fact, much of the care that was offered for free went unused. Barriers cited by the 14- to 21-year-old youth included anticipation of condescending attitudes from physicians, transportation problems, and culturally determined acceptance of illness as something inevitable (Walter & Leahy, 1983).

Poverty and Nutrition

In the late 1960s, and again in the 1980s, national attention focused, at least briefly, on the relationship between poverty and malnutrition for millions of Americans (Graham, 1985). From 1968 through 1970, the Ten-State Nutrition Survey was conducted to focus on the incidence and location of serious hunger and malnutrition among low-income populations, more than 50% of whom were under 16 years old. In response to the documentation of the grim state of nutrition in their 40,000-person sample, the Congress responded by expanding existing food assistance programs and creating new ones such as the special Supplemental Food Program for Women, Infants, and Children (WIC) (Graham, 1985). These continuing efforts largely survived vigorous budget cutting during the 1980s; however, malnutrition, obesity (Sullivan & Carter, 1985), and other dietary problems among poor adolescents and their families remain a pressing national problem.

Among low-income Blacks in rural Mississippi (ages birth to "56 and older"), income was found to have a greater effect on low nutrient intake than did education (Koh & Caples, 1979a). Adolescents ages 11 to 18 had the poorest nutrition of all age groups; this is true among adolescents in the general population as well (Hegsted, 1976). Females had better diets than males (Koh & Caples, 1979b). In the Ten-State Nutrition Survey, which included a low-income sample, White males were above the recommended dietary allowance, and white females were below. As with the Mississippi (which was not included in the Ten-State Survey), Blacks, both female and male, were below the recommended RDA.

In a sample of 9,000 socioeconomically disadvantaged children in Baltimore, there was a 33% prevalence of signs of malnutrition such as deficiency levels of vitamin A, carotene, total protein and

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serum albumin (Hepner & Maiden, 1971). Plots of various nutritional intake indices by age reveal that low values increase sharply with, and immediately following, the adolescent growth spurt. It appears that borderline nutritional status becomes overt malnutrition when the stress of rapid adolescent growth is added to the system (Hepner & Maiden, 1971).

Jones and colleagues (1985) analyzed data from the National Health and Nutrition Examination Surveys (HANES) I (1971-1975) and II (1976-1980) to determine the influences of poverty on child growth. Among 12- to 17-year-olds, four groups were compared--Black and White, males and females. Nonpoor youth were significantly taller than poor youth in all race and sex groups in HANESI, except for Black females. In the HANESII data, nonpoor children were taller in all race/gender groups, but only one of the four differences was significant. For weight, nonpoor youth weighed more than the poor, except for Black females in HANESI and White females in HANESII. The differences between poor and nonpoor decreased between HANESI and HANESII. This change may be a reflection of the great increase in social programs that occurred at this time, including the quadrupling of enrollment in the Food Stamp Program from HANESI to HANESII. Nonetheless, poor children remain smaller, a condition that may be a sign of increased risk for development of malnutrition.

Nutritional status in relation to vitamin and mineral use was examined through analysis of data from NHANES II. This data set, which was mentioned above, includes responses from a probability sample of 7,080 children collected nationwide from 1976 to 1980. Increased Household income was related to increased supplement use for 12- to 18-year-old girls, but not for boys (Bowering & Clancy, 1986).

Walter found that there were both economic and noneconomic influences on the nutritional status of poor American Indian youth (1974). He concluded that attitude toward food was more important than economic factors in predicting diet, although both sets of variables were influential. It was also true that young women had better diets than young men.

Poverty and Dental Health

Forty years of research on utilization of dental services have consistently shown that poor people receive less care than the nonpoor. Data demonstrating socioeconomic differences in dental health, however, are much rarer.

A survey of dental status, needs, and practices among poor and nonpoor adults, conducted in two health clinics in New York City, included 1,290 respondents. The poor group was disproportionately minority; in particular, the number of respondents who had Puerto Rican fathers was much greater in the poverty (47%) than the nonpoverty group (12%). With the proportion of Blacks about equal in the two groups, the Whites formed only 20% of the poverty group, but 64% of the nonpoverty group (Nikias, Fink & Shapiro, 1939. The poverty group sought dental care at lower rates, whether for prevention or for treatment of "tooth trouble". There were, however, no group differences in perception of the need to see a dentist soon. Since the perception of need exists among the poverty group, it was concluded that there must be other barriers to receiving dental services, such as money, availability, and accessibility of services (Nikias et al., 1989).

Poverty and Injuries

Few studies have discussed the influence of poverty on injuries in adolescence. However, several studies have looked at specific injuries found in urban settings. For example, Whitman et al. (1984) found that while motor vehicle accidents were the leading cause of head injuries in suburban teens, gunshots were an especially important cause of head injuries in urban Blacks between 15 and 19. Moreover, areas with a lower preponderance of one- and two-story units--i.e., urban areas with a greater proportion of high-rise dwellings--generally have had higher incidences of children admitted to a hospital following a fall from a height (Meller & Shermeta, 1987). Interestingly, though, regardless of building height, most falls occurred from a height of less than 12 feet--less than one story. Meller and Shermeta (1987) looked at a sample of 48 predominantly poor children (75% of whom were receiving public aid) appearing at an emergency room as the result of a fall. Of these patients, only 36% were between 10 and 16 years old. Thus, while falls in urban settings are of general concern, they appear to be less of a problem for adolescents than for younger children.

Just as little is known specifically about injuries in high-poverty areas, little has been written about injury-related deaths

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in poor adolescents. Clearly, though, poverty and such death rates are related. MacKay et al. (1979) noted that death rates for teens from house fires were highest in Native Americans and Blacks; however, burn rates were negatively related to a community's median family income (MacKay et al., 1979; Paulson, 1988). Finally, while few differences have been reported between death rates due to unintentional firearm injuries of Black and White teens, these death rates do tend to be among the highest in poor areas and in rural areas (Paulson, 1988).

Finally, homicides have been reported to be the second most frequent cause of death in 15- to 24-year-olds (Bass et al., 1985). Although much has been written about the higher homicide rates of young Black males compared with Whites, racial and/or ethnic differences disappear when SES is controlled for ("Homicides among young Black males--U.S., 1970-1982"; Parker & Smith, 1979; Williams, 1984). Little research has addressed directly the logical conclusion which follows from this discovery--that poverty is directly related to homicides, at least in young males.

Poverty and Adolescent Pregnancy

Poverty and teen pregnancy are almost inextricably intertwined. A disproportionate number of welfare recipients are teenage parents, and women who were teen-aged mothers (Hardy, 1982). Almost 15 years ago, the federal government spent over $8.5 billion on AFDC households where the mother was an adolescent when she had her first child (Hardy, 1982). In general, adolescent parenthood triggers a series of related events that heighten a new

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family's likelihood of being poor: greater medical risks during pregnancy; increases in single parenthood, either through eschewing marriage to the father or entering into an unstable marriage; inadequate child support from an absent father; larger family size; truncated education, often resulting in reduced job skills; lower lifetime earnings; and welfare dependency (Committee on Ways and Means, 1985).

Poverty and teen pregnancy appear to have a circular relationship: not only does becoming an adolescent parent heighten a woman's chances of being poor, but being poor is related to a heightened likelihood of becoming pregnant as a teen. For instance, birth rates for unmarried adolescents have clearly been correlated with the women's family income (Franklin, 1988). Specifically, a female adolescent living in a lower-income, female-headed household, with siblings who had been born out of wedlock, had a higher probability of giving birth outside of marriage. By contrast, though, high-income racial/ethnic minorities tend to have fewer children than do similar groups of White (Franklin, 1988).

The most obvious antecedent of early pregnancy is early initiation of unprotected sexual intercourse. In general, poverty has been associated with early initiation into sexual activity. Torres and Forrest (1983) focused on estimates of all women exposed to unwanted pregnancies--that is, those women who were sexually active, able to become pregnant, not intentionally pregnant and not trying to become pregnant. Of those women at risk with incomes below 200% of the poverty level, almost one fifth were teenagers. Among women under 20, the proportion at risk was smaller for those women from higher income families (Torres & Forrest, 1983). The authors attributed this finding primarily to the lower levels of sexual activity reported among higher income, unmarried White adolescents. Poverty and ethnicity appear to interact in their influence on sexual activity as well: both lower income and Black females were more likely to be sexually active (Franklin, 1988). Clearly, the combination of low socioeconomic status and minority group status can work to increase the ethnic minority adolescent female's vulnerability to earlier sexual experience, and, subsequently, to possible early pregnancy (Franklin, 1988).

Unfortunately, the knowledge that nonmarital pregnancy rates tend to be highest among adolescents from poor families provides little information about specific aspects of the environment which are important in contributing to this heightened risk. The literature provides few insights, as well. For example, high levels of nonmarital pregnancy among Black teenagers in Chicago were associated not only with poverty, but with correlates of poverty, such as female-headed households, large family size, and ghetto residency (Hogan et al., 1985). Others have found that adolescents were more likely to engage in sexual intercourse as population density increased (e.g., Abernathy et al., 1979; Franklin, 1988).

Poverty, Mental Illness, and Suicide

The relationship between low social class and a higher incidence of symptoms of mental disorder in adults is one of the most firmly established findings in psychiatric epidemiology (Allen & Britt, 1983). An exemplar of research in this tradition is Hollingshead and Redlich's (1958) early work on class structure and mental illness. Their psychiatric census of New Haven, CT, showed that as income and education decreased, psychiatric disorder increase. Moreover, there were substantial differences in where, how, and how long treatment was provided to members of different social classes.

Sound epidemiological data replicating this relationship between class and disorder among youth are not abundant, both because of the lack of consensus regarding the definition of youth disorders (Bromet & Schulberg, 1989), as well as the difficult in distinguishing transient, developmentally appropriate changes in behavior from clinical disorders than warrant treatment (Allen & Majidi-Ahi, 1989). In a review of 35 studies of the epidemiology of childhood psychopathology, Gould et al. (1981) found that studies in poor, Black, urban communities reported the highest rates of disorder.

In a study of parents' perceptions of behavioral problems among socioeconomically disadvantaged youth ages 13 to 18, Hawley et al. (1984) found that parents complained of school grades, attendance, and household behavior problems such as fighting with siblings, in descending order of frequency. Single-parent families reported three times the number of behavioral problems as two-parent families. Single-parent families also showed a lower ability to cope with problems, explained largely by their reduced use of community resources, or social isolation.

Low socioeconomic status appears to be a risk factor for the onset of adolescent depression. Adolescents from families with low incomes were found to have higher rates of depressive moods (Kaplan et al., 1984; Wells et al., 1985). Depression during adolescence has been of special interest in recent years because of the rapid increase in the rates of adolescent suicide, which some believe to be related to depression. An estimated 15% of patients with a severe depressive disorder of at least one month's duration commit suicide.

A survey in a midwestern city found that rates of admission to an outpatient child and adolescent psychiatric clinic were inversely related to family income (Bedi, 1983), a sign of utilization, though unrelated to level of need.

Suicide is currently the second leading cause of death in youth people ages 15 to 24 (Blumenthal, 1988). For youth ages 15 to 19, the rate of suicide tripled between 1960 and 1980 (Blum, 1987). In 1987, 5,121 of the 29,453 recorded suicides were by youth. Among younger children between the ages of 5 and 14, as many as 12,000 may be hospitalized for self-injurious behavior. These numbers may in fact underrepresent the actual problem by as much as a factor of two or three, given the widespread underreporting of the problem (Blumenthal, 1988).

Adolescents who attempt suicide are likely to show one of several risk factors, all of which occur more often among socioeconomically disadvantaged youth. These include greater numbers of negative life events, fewer social supports, higher incidence of family violence (Pfeffer, 1989), greater incidence of running away from home, more unwanted pregnancies, and fewer personal resources for coping with a more stressful environment (Blumenthal, 1988). Living away from home in a correctional facility (Cantor, 1989) or group home is an additional risk factor more likely to occur among socioeconomically disadvantaged youth (American Academy of Pediatrics Committee on Adolescence, 1988). In a survey of 2,792 adolescents ages 13 to 18 who attended free clinics in 10 large cities (Robins, 1989), severe poverty increased the risk of suicidal thoughts by a factor of 2 to 3.

Poverty and Adolescent Abuse

Incidents of the abuse of aolescents are less likely to be reported to officials than are such incidents happening to infants or children (Hampton & Newberger, 1985). Moreso, reported cases of abuse of infants and young children tend to be concentrated among low-income groups; however, this appears to be less true for reports of adolescent abuse. For example, Garbarino and Gilliam (1980) reported that while almost 40% of the cases involving infants came from families receiving aid to families with dependent children (AFDC), fewer than 30% of the cases involving adolescents did so. In general, a variety of measures of socioeconomic status suggest that reported adolescent-abuse cases tend to be more representative of the general population, while reported child-abuse cases came primarily from families living in poverty.

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Perhaps the routine care of a young child more heavily depends on the material resources available in an environment than does raising an adolescent. On the other hand, while child abuse may be a kind of indicator of economic hardships, adolescent abuse may be less tied to poverty, representing instead more of an interpersonal problem.

Using such broad strokes to describe adolescent abuse, though, may mask important differences within adolescent abuse. In fact, families of adolescents suffering short-term abuse--abuse which begins in adolescence and may represent the bulk of reported adolescent abuse cases (Blum & Runyan, 1980)--appear to be more settled and stable, and more often from the middle socioeconomic levels. On the other hand, adolescents suffering long-term abuse--abuse which begins in childhood and continues into adolescence--appear to be from families of relative poverty, marital instability, and residential mobility (Galambos & Dixon, 1984).

Poverty and Substance Use and Abuse

Popular thought has convinced many that families of lower socioeconomic status produce a disproportionate share of substance-using youth (Fawzy et al., 1987). For instance, teens from lower SES families were more likely to smoke tobacco, although this relationship was less strong than that between an adolescent's smoking and his/her parent's smoking (Evans & Raines, 1982). One explanation--that of social adjustment--purports that the use of illegal substances reflects an adolescent's problems in dealing with the pressures of daily life (Dembo et al., 1979). As a result

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of their marginal positions in society, poor teens may exhibit non-normative cultures and styles of substance use. As a result, stereotypes of these teens' substance use behaviors emerge. Thus, adolescents living in poverty are believed to attempt to compensate for deficiencies accompanying poverty by using or abusing of both licit and illicit substances (Fawzy et al., 1987; Gordon & McAlister, 1982).

A second explanation--a social crisis perspective--holds that with settings where teens experience few opportunities for legitimate access to goals, variations in substance use can be explained primarily by differences in social class. Issues such as the cost and availability of particular drugs, current popularity, and socialization of the drug use are critical in understanding substance use within adolescents living in poverty (Dembo et al., 1979).

To try to understand this relationship a bit better, Marston et al. (1988) compared adolescents who reported no use of nicotine, alcohol or other drugs to those who reported using at least one of them. Although the research design was relatively weak, they found no differences between non-users and users on employment or educational levels. (It is not clear, however, whether these employment and education levels were those of the students or of the parents.)

Looking at variables which might mediate a relationship between socioeconomic level and adolescent substance use, Blount and Dembo (1984) explored teens' perceptions of the "toughness" of and level of drug use in their neighborhoods. Although no meaningful differences emerged for alcohol use, those living in neighborhoods they believed to be tougher and to have higher levels of drug use were less likely never to have used marijuana.

Poverty and Delinquency

Delinquency can be operationalized either as the youth's report of his or her delinquent activities or as archival records of a youth's official contacts with the juvenile justice system (e.g., police arrests, court petitions filed). A number of researchers have pointed out the lack of relation between social class and self-reported delinquency (e.g., Hindelang et al., 1981; Westendorp et al., 1986). However, socioeconomic status differences can appear in archival statistics (e.g., Westendorp et al., 1986), leading some to posit a bias in the juvenile justice system against adolescents from lower socioeconomic levels.

Several theories have attempted to explain apparent relationships between poverty and delinquency. For example, differential opportunity theory posits that while all youth aspire to the same ultimate goals (e.g., material resources, good jobs), youth living in poverty have fewer *legitimate* opportunities to pursue these goals. As a result, they are more likely to turn to *illegitimate* (e.g., delinquent or criminal) activities in pursuit of their goals (Cloward & Ohlin, cited in Krisberg & Austin, 1978). On the other hand, differential association (Sutherland, cited in Krisberg & Austin, 1978) states that youth learn to commit illegal behaviors from their peers and others with whom they associate.

The skills and values of those in a teen's social network determines whether he or she will learn and engage in criminal behavior.

A third theory--differential social organization--arose in response to the view that differential association alone failed to account for why a youth "hangs out" with the people that he or she does, or why youth have differential opportunities for association (Reinarman & Fagan, 1988). Instead, different types and degrees of social organization account for the distribution of friendships and patterns of association; these differential associations, then result in or inhibit an individual youth's delinquent activities (Reinarman & Fagan, 1988).

Despite a variety of theories attempting to explain the apparent link between poverty and delinquency, the fact is that once the presenting offense and the prior offense record of the youth are controlled for, SES played only a minor role in the treatment of adolescents committing delinquent acts (Hindelang et al., 1981). In one survey of the literature, Hindelang et al. (1981) found an average correlation between official delinquency and income of -.04. In their own work, they reported a gamma of -.05 between official delinquency and occupation. Given their assessment that the relationship between social class and official delinquency varied between zero and weakly negative, systematic bias with the juvenile justice system seems less likely.

Regardless of the fact that previous delinquency mediates the relationship between SES and official delinquency, serious delinquent behavior is often concentrated in poor urban areas (Joe, 1987). Clearly, the consistency and strength of community-level poverty and officially recorded delinquency are beyond dispute (Hindelang et al., 1981). Within a city, a number of community variables (e.g., the proportion of families receiving public aid, the median rental costs) consistently demonstrate a relationship across ecological units, such as census tracts or zip codes. As discussed earlier, however, such associations still generally overestimate individual-level correlations.

In trying to understand this relationship further, Reinarman and Fagan (1988) attempted to look at both community- and individual-level variables influencing both official and self-reported delinquency. In follow-up interviews with already adjudicated juvenile offenders placed on probation, they explored the relationship between a youth's delinquency and four variables of the census tract in which the youth was living: percentage of Blacks in the area, percentage of female-headed households, percentage of people unemployed longer than 15 weeks, and household density. No significant relations between self-reported delinquency and any community variables were significant. Although the community variables were highly intercorrelated (from .47 to .87), the only one that had a statistically significant relationship to official rearrests was the percentage of Blacks living in the youth's census tract: those re-arrested for more serious crimes were more likely to live in areas with a high proportion of Blacks. Since no differences existed in the reported

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level of delinquent activity across census tracts, the authors suggested that perhaps poorer neighborhoods were simply more heavily patrolled, leaving their adolescents more vulnerable to arrest (Reinarman & Fagan, 1988). They also noted that those being re-arrested for multiple crimes were disproportionately located in the lowest quality neighborhoods--those with high chronic unemployment, a greater proportion of female-headed households, lowest median incomes, and greater household density. At the same time, those not re-arrested were underrepresented in those neighborhoods.

SERVICE DELIVERY AND UTILIZATION

In general, the problems in delivering services to poor adolescents are the same as those that accompany attempts to serve the needs of any adolescent, only moreso. The developmental issues are complicated by the financial constraints of poverty, as well as by the differing socialization toward help-seeking among racial and ethnic subgroups of the poor. If physicians know little about adolescent medicine (and that is the case), they know even less about the motivations, home life, or habitual behaviors of socioeconomically disadvantaged youth. This section discusses issues of service delivery and utilization for poor adolescent in the nine areas of the previous section.

Physical Health Care

The primary societal device for alleviating the financial burden of health care on the poor is Medicaid. It was assumed that socioeconomically disadvantaged people would be mainstreamed into the medical care system that serves nonpoor Americans. It seems that, while Medicaid, implemented in 1967, has made health care significantly more accessible to the poor, it has not resulted in equal access. Medicaid is seen by Orr and Miller (1981) to have had the paradoxical effect of stimulating the expansion of services from public agencies, rather than increasing the participation of poor children in private services. As many as 50% of physicians refuse to accept Medicaid assignment, and many areas have no practitioners available, whether willing to accept Medicaid or not. Additionally, not all of the eligible poor are actually covered by Medicaid (McManus & Davidson, 1982). In Flint, Michigan, from 1973 to 1977, non-enrollment of families eligible for Medicaid was related to the presence of older children, more highly educated mothers, working mothers, and White families (Gortmaker, 1981).

A five-city study of the impact of Medicaid on use of health services found that a high proportion of children and the poor were covered, and that Medicaid coverage was associated with increased health services utilization (Okada & Wan, 1980). However, increased use of Medicaid did not close the gap between utilization rates of the poor and national averages. Furthermore, between 1975 and 1983, eligibility requirements for Medicaid changed, leading to a reduction of the proportion of socioeconomically disadvantaged Americans covered, from 63% to 46% (Blendon et al., 1986).

Another public health program designed to address the problem of lack of access among the poor was the organization of community health centers (CHCs) in areas where socioeconomically

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disadvantaged youth live (Pless & Haggerty, 1985). In an assessment of the effects of CHCs on utilization among urban, low-income populations, it was determined that CHCs were serving a large proportion of the population in these areas (Atlanta, GA; Charleston, SC; Roxbury, MA; Kansas City, MO; and East Palo Alto, CA). Further, they were attracting a disproportionately high number of children (ages 0 to 17). The populations shifted from using hospital clinics and emergency rooms, to use of the CHCs, in part because of the decrease in travel time associated with placement of the CHCs in the community (Okada & Wan, 1980).

Community-based health services were advocated as a significant improvement in access to health care for the poor. In a national demonstration project in the early 1980s, the Robert Wood Johnson Foundation funded 20 teaching hospitals to implement programs of community-based, comprehensive services to high-risk youth, and to train physicians to work with this population (Lear, Foster & Wylie, 1985). In the first two years of operation, 74% of the patients who visited the clinics were female, 64% were between the ages of 15 and 19, and 15% were ages 10 to 14. All sites had begun at least two activities designed to train pediatric faculty in adolescent medicine. It was felt that the appeal of these sites for clients rested in the comprehensive services offered through one agency, often at one location.

In rural areas, private physicians are frequently the only source of services, and are scarce. Money is a barrier to their use, and the difficulties involved in travelling to more populous areas for treatment are sometimes insurmountable (Herman, 1972).

Nutrition

Few studies discuss service approaches to heightening nutrition. However, Dillon (1975) presented a one-year nutrition intervention program in a socioeconomically disadvantaged area of Chicago was staffed by family health workers who were recruited from the neighborhood. The project demonstrated that a community-based program could be implemented on a reasonable budget to provide outreach to other public service agencies for coordination of services for clients, home visits for clients who had trouble keeping clinic appointments, nutritional education and dietary counseling.

Dental Health Care

A community-based dental health intervention study involving 839 rural Appalachian children ages 6 to 13 found the prevalence of dental caries to be similar to rates found in nonflouridated urban areas. However, the percentage of children who were free of caries was substantially lower than the percentages reported in urban areas. At the completion of the five-year intervention, in which University of Kentucky dental students implemented a community-wide program of education and treatment, there were some indications of program success. Both the caries attack rate and the loss of permanent teeth--extracted because of disease--had been reduced among the 11- to 13-year-olds (Heise et al., 1973).

While 54% of those treated in the first year returned for continued care in the second, continuous participation was only

21% during the fourth year. Thus, the removal of financial and transportation barriers, in addition to concerted efforts to establish rapport with the dental patients, did not guarantee wide and continuing use of dental care facilities by the indigent rural population.

Injuries

Overall, studies have not differentiated among injuries occurring to poor and nonpoor adolescents. Moreover, the only treatment settings which have been discussed have been hospitals--either emergency rooms or medical wards. As a result, we have little insight into injury-related treatment or services issues which go beyond those plaguing the poor in obtaining either routine or emergency medical care.

Adolescent Pregnancy

Pregnancy Prevention

The most direct approach to the prevention of teen pregnancies is to convince adolescents not have sexual intercourse in the first place. In 1985, the Department of Health and Human Services' Adolescent Family Life Program, through the Office of Adolescent Pregnancy Prevention, was able to spend approximately $3 million for programs that tried to prevent teenage sexual intercourse through enhancing parents' ability to educate their children about sexual matters and to encourage them not to have intercourse. Sexuality education programs such as these have been found to increase girls knowledge about sexuality without increasing their sexual activity. However, the impact on adolescent pregnancy

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itself seems to be clearest only when delivered in tandem with accessible clinic services, such as school-based clinics (Committee on Ways and Mens, 1985).

The second approach to pregnancy prevention, and the one most discussed in the research literature, is one which attempts to lower the likelihood of unprotected sexual intercourse by increasing sexually active teens' utilization of contraception. In addition to understanding contraceptive utilization, though, this subsection also looks at issues involved in teens' utilization of facilities both to obtain contraceptives and to receive services after a pregnancy.

Contraceptive Utilization

Orr (1984) reported that 48% of sexually active teens used some kind of prescription method of contraception. Of prescription methods, the oral contraceptive pill has been the overwhelming favorite for all adolescents (Emans et al., 1987), while condoms and contraceptive foams and jellies are the methods most easily available for all adolescents. However, social class differences emerge in the practice of contraception. For example, Hogan et al. (1985) reported that 41% of the adolescent females from higher socioeconomic status utilized some form of contraception at their first experience of sexual intercourse, compared with only 17% of those from the lower socioeconomic statuses. (A similar pattern was observed among the young men.) As a result, adolescents from higher socioeconomic status families were roughly 83% more likely than lower socioeconomic status teenage women to have practiced contraception at first intercourse. Furthermore, ethnicity and poverty appear again to interact, placing poor ethnic minority adolescents at even greater risk: low-income Black adolescent females had more negative attitudes toward birth control, and used contraceptives less effectively, than did low-income White adolescent females (Franklin, 1988).

In addition to poverty, neighborhood quality (as determined by census tract characteristics) was related also to the probability of contraceptive use at first intercourse (Hogan et al., 1985). Adolescents living in the lowest quality neighborhoods--e.g., those with the lowest median incomes and the greatest proportion of families living below the poverty line--were less likely to have used contraceptives at first sexual intercourse. In general, 44% of teenage women who were from higher socioeconomic status families residing in a higher quality neighborhood had used a contraceptive at first intercourse. In contrast, only 12% of those from lower socioeconomic status families residing in the lowest quality neighborhoods did so. Overall, those from neighborhoods that were average or above average in quality were 91% more likely to have utilized contraception at their first intercourse than were teenage females who resided in lower quality neighborhoods (Hogan et al., 1985).

In addition to concerns about the utilization of contraception at first intercourse, poverty appears to be related to continuing utilization of contraception, as well. Emans et al. (1987) compared adolescent contraceptive behavior in three health care settings: an inner-city clinic serving many adolescent funded by Medicaid, a birth control clinic in a mid-sized industrial city, and a suburban private physician's office. One of the major outcomes of interest was the teen's "compliance" to a birth control regimen: returning for a 3-month follow-up visit and either having taken the pill as directed or having stopped because of no further need for contraception. Patients at the inner-city clinic were more likely to have reported never using a prior method (Emans et al., 1987). Moreover, after controlling for ethnicity, residence, educational goals, age, and father's education, clinic site proved to be the best of several predictors of adherence to the prescribed regimen at 3-month follow-up interviews. Overall, an older, White adolescent living in a suburban household or at school was more likely to follow a contraceptive regimen than was an inner-city adolescent female from a single-parent household who received her health care in an inner-city clinic funded by Medicaid. Furthermore, three-month adherence was associated with higher career goals. In a similar vein, Furstenberg et al. (1983) found that older, White adolescents who had working parents with higher levels of education were more likely to continue contraception.

As noted above, higher aspirations--whether career- or education-oriented--have been found to be important in predicting initiating and continuity contraceptive utilization. Some researchers have posited that adolescents living in poverty are aware of their restricted career and educational options; as a consequence, they make conscious decisions not to try to avoid pregnancy (Franklin, 1988). Indeed, numerous studies have shown that higher levels of educational achievement, clear educational goals, and positive attitudes toward education appear to make nonmarital births less likely for both Black and White females (Franklin, 1988). However, Hogan et al. (1985) found that high career aspirations alone were not related to contraceptive use among teenagers from ghetto neighborhoods. Instead, such high aspirations may become an important motivation for contraceptive use only in situations where future aspirations are encouraged by others in the community. In summary, poverty and lower neighborhood quality have both been related to an earlier age at which females begin sexual intercourse, to the decreased likelihood that urban teenagers will use contraceptives when they initiate sexual activity, and to the decreased probability that they will continue contraception consistently (Hogan et al., 1985).

Service Utilization

Health departments made up over half of all family planning provider agencies. Yet Torres and Forrest (1983) estimated that two fifths of all low-income women who were at risk of having an unintended pregnancy (i.e., not pregnant or trying to become pregnant, not sterile, and currently sexually active) in 1981 were served by family planning clinics. This was roughly double the proportion of at-risk, low-income women cared for by private physicians. Moreover, Orr (1984) noted that 57% of all 15- to 19-year-olds received family planning services during 1981: 30% from organized programs, and 27% from private physicians. Race and

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poverty may interact in service utilization, as well. In a national probability sample survey of 15- to 19-year-old females living in metropolitan areas, Zelnik et al. (1984) compared those using private physicians to those using family planning clinics for prescription contraception. No differences appeared between Whites using either service; however, with Blacks, parents of young women using clinics had lower levels of education than did those who used private physicians.

As noted earlier, adolescent mothers are at heightened risk for long-term poverty. A number of programs have attempted to work with adolescent mothers to decrease their medical and financial risk. Programs appear to have been able to provide timely prenatal care, as well as helping pregnant adolescents remain in school during their pregnancies, and increasing the likelihood of returning to school after delivery (Committee of Ways and Means, 1985). Rappaport (1987) noted one aspect of Project Redirection--the "community woman"--which provided a community-based support person for teenage mothers to help to buffer the stresses experiences by a young mother and her child. This "community woman" operated as a mentor to the young mother, as a well as a mediator for the young women with community agencies. Yet, adolescent mothers need comprehensive services to address a variety of problems facing the young mother. For example, school-based services must provide child care--the single greatest unmet need of young mothers--as well as other supportive services, if the new mothers are to continue in school. Clearly, education is a

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critical issue, since inadequate education can easily limit a person's employment opportunities and can heighten the likelihood of welfare dependency and of being poor. Unfortunately, little evidence is available about long-term effects of such programs, such as increasing education levels or enhancing employment histories (Committee on Ways and Means, 1985).

Finally, few of the services designed for teenage parents have included teenage fathers (Emans et al., 1987). Nix et al. (1988) noted a number of specific components requested by teen fathers: e.g., job training and placements; vocational counseling, educational services, medical services; nutrition information (about mother and infant); child day-care service; parenting skills; family planning; peer, individual, group, and family counseling; recreation activities (including sports).

Suicide

Services to prevent suicide and treat suicidal attempters are plagued by an even more acute lack of special knowledge than is characteristics of services to youth in general. A survey of 396 community programs serving suicidal adolescents revealed that an unusual income distribution was the most common special characteristic among populations served by these agencies. Fourteen percent (55 programs) were in areas of high poverty and/or unemployment (Simmons, Comstock & Franklin, 1989). Another 14 programs reported serving high concentrations of both wealthy and poor clients.

An adolescent with sufficient motivation to seek out a suicide prevention program would be deterred by the absence of any clues in the titles of these programs that they serve young people. Of the 396 programs surveyed, only 8 had the word "teen" or "youth" suicide in their titles. Only 33 more (8%) mentioned serving youth without including "suicide" in the title. Specialization, or even expertise, in adolescent suicide was an exception, rather than the prevalent phenomenon. Youth tend not to seek out general services for problems, but are much more likely to approach a service that is advertised as especially for them (Simmons et al., 1989).

Adolescent Abuse

While the U.S. has done far too little to serve abused infants and young children, we have done even less for abused adolescents. By all accounts, the level of unmet need is staggering, regardless of SES. However, social class clearly influences the treatment of an abused adolescent. For many reasons, abused adolescents encounter the juvenile justice system more often than adolescents from higher SES levels--most often as status offenders. Status offenses include a variety of behaviors which are only illegal because of a youth's age--e.g., drinking alcohol or running away. In particular, running away from home is not only a status offense, but is also a rational response to the abuse of an adolescent within his or her home. For example, one study found that abused adolescents were twice as likely to be detained for running away than were nonabused adolescents (Andrews & Cohn, cited in Garbarino & Gilliam, 1980).

Another reason abused teens tend to be labeled as status offenders lies in petitions filed on youth as 'persons in need of supervision' (PINS). This represents a process whereby a parent asks the state to take responsibility for his or her child(ren). However, the system as it currently operates is heavily weighted in favor of the parents. For example, even if an officer of the juvenile court believes that such a PINS petition is unfounded or unnecessary, a parent can still legally insist that it be filed. Once the case has gone to court, the parent's wishes are usually granted. This creates a bind for social service professionals: when a youth runs away because of abuse in the home, the worker can either seek legal action on the teen or on the parent. Unfortunately, even in cases where an adult in the home has been clearly abusive, workers must produce convincing and admissable evidence--a lengthy and often extremely difficult process. In such cases, filing either a PINS/status offense petition on the youth or an abuse petition on the parent removes the youth from the dangerous home. However, the greater ease of filing petitions on the youth forces the worker to prosecute the victim rather than the abuser. It should be noted that many states have been working to eliminate the court processing of status offenses, primarily through mandatory community-based diversion programs utilizing family counseling.

As a result of these issues, adolescents are more likely than children to appear in Juvenile or Family Court (Garbarino & Gilliam, 1980). Concomitantly, adolescents are also more likely to be institutionalized as a result of abuse. Once teenagers are institutionalized, they too often become vulnerable to other forms of mistreatment from fellow residents and/or the staff.

Institutions are not the only option for out-of-home placements, though; foster care may be an option as well. In fact, the protective service system places more adolescents in foster care than in any other placements. However, when teenagers are involved, the foster-care system can be a serious problem in its own right. Placements are difficult to arrange--and even harder to maintain--for teenagers: when adolescents are not happy, they can easily run away or otherwise undermine any non-secure placement.

Community-based group homes are typically considered to be a good way to care for teenagers. The difference between life in such homes and life in a conventional institution can be enormous. Unfortunately, too few group homes are available to provide secure and developmentally enhancing care for all the youth who would benefit by living in one. Moreover, a number of group homes newly available for teenagers are privately run. As a result, they tend to be beyond the economic resources of many families living in poverty. In many cases, the only choice is between institutions and conventional foster care--a grim choice between two equally undesirable options, in many cases.

Substance Use and Abuse

Two studies have looked at issues involved in treatment provision for poor adolescents using substances. Friedman and Glickman (1986) focused on a group of adolescents receiving treatment for substance abuse--39% of whom were in lower or working class families (18% were receiving public support, 21% considered themselves lower working class). For over half of this group, marijuana use was the presenting substance use problem. Using change scores calculated by weighting a youth's frequency of use by the seriousness of drug used upon entering treatment and after completion of treatment, they defined treatment "success" to be a negative average change score across all program participants. Doing so, they found no relationship between socioeconomic status and treatment success. However, they did find that a substantial amount of the variance in treatment success was accounted for by the provision of developmentally appropriate components (e.g., world-of-work skills, educational assistance, recreational activities, birth control services). In fact, the presence of such components had a stronger relationship to treatment success than did any specific type of individual therapy methods utilized. It should be noted that approximately one half of all adolescent participants across all the programs in this study were reported to have left the programs or were terminated before completing treatment. As a result, these findings can only be generalized to those youth sufficiently motivated to change that they remained in a treatment program until completion.

Relatively little is known about serving adolescents with substance-use-related health problems who are not involved in drug treatment programs. To examine this issue, Chitwood and Chitwood (1981) compared characteristics of participants attending a metropolitan drug abuse program to those appearing in a hospital emergency room for treatment of substance-use-related problems. Those in the substance use treatment program came from families of lower social-class levels, and their parents held jobs with lower occupational status, than did the emergency room patients (Chitwood & Chitwood, 1988). More importantly, 6.8% of the users in the treatment population were under 18, while 18.5% of the emergency room patients were under 18. These findings suggest that substance-using adolescents living in poverty may be seriously underserved.

Delinquency

The primary treatment for an officially adjudicated delinquent is either formal or informal probation, or some form of incarceration (e.g., training school, jail). In a series of studies, some researchers have examined differences in how adolescents who have committed delinquent acts are treated. For instance, Shanok et al. (1983) compared delinquent and nondelinquent psychiatric inpatients; Lewis et al. (1980) compared violent adolescents referred either to a state training school or a state hospital psychiatric unit. Unfortunately, the influence of poverty on such treatment decisions cannot be examined, since the vast majority in these samples (not surprisingly) came from the lowest socioeconomic classes. However, Westendorp et al. (1986) looked at two samples: one drawn from several samples of mental health treatment programs, and one drawn from placements mandated by the juvenile justice system. Of the four demographic variables utilized--social class, ages of mother, father and subject--none were significantly different between the two systems.

BARRIERS TO SERVICE UTILIZATION

Little research or even thoughtful discussion has been brought to bear in the literature on the barriers to services experienced by adolescents living in poverty. However, three areas have at least some examinations of this concern: physical health, adolescent abuse, and adolescent pregnancy. These areas are examined below.

Physical Health

Thanks largely to Medicaid, progress has been made in closing the gap between the poor and nonpoor in the use of health services. In the mid-1960s, nonpoor children visited physicians 23% more than did poor children. By the late 1970s, poor children visited physicians more than did nonpoor, but when the rates were adjusted for need to visit a physician (as evidenced by health status), the gap favoring nonpoor children remained (Davis, Gold & Makuc, 1981; Kleinmen, Gold & Makuc, 1981).

In Flint, Michigan, during the period from 1973 to 1977, the differences among income groups in utilization decreased because of Medicaid; however, children on Medicaid were still less likely to have a regular source of care, and were also less likely to have a regular pediatrician (Gortmaker, 1981). Although services have been covered by Medicaid since 1975, differences between poor and nonpoor in utilization of dental care actually increased over the period of study, with non-utilization among the poor, and utilization among the wealthier, increasing.

Information about the reasons for underutilization of health services by the poor is important because underuse appears to explain at least part of the differences in health status between poor and nonpoor adolescents in this country (Pauly, 1973). Socioeconomically disadvantaged youth rarely encounter medical professionals who understand their backgrounds, their cultures, and their attitudes toward health and illness (Fielding & Nelson, 1973). Moreover, their care is crisis- rather than prevention-oriented; thus, a relationship with a stable, caring professional is highly unlikely.

Data from a low-income urban population revealed that seeking medical care has a high priority among this group, at least when responding to hypothetical situations such as whether to seek help for stomachache and dizzy spells, or whether to apply for a job just advertised in the newspaper. Further, nearly 63% of the sample expressed confidence that physicians are interested in them, contrary to the hostility and withdrawal from the system that was hypothesized. For this sample, money, distance, and transportation were the main barriers to accessing the medical system. As was mentioned above, though, "the poor" are a racially and ethnically diverse population, decreasing the likelihood that one set of service policies will serve for all. Evidence of the heterogeneity of the poor lies in racial differences in the relationship between distance and use of facilities. Distance was inversely related to use of a public hospital for poor Blacks, but poor Whites were unwilling to use the Black public hospital, not matter how close it was to their residence (Goering & Coe, 1970).

Abuse

As discussed in the previous section, abused adolescent are most often served in the juvenile justice system, the foster care system, or community-based group homes. In part, this focus on these three service systems in dealing with abuse is a class phenomenon. Garbarino and Gilliam (1980) noted that those most likely to petition the courts for help through status offenses, PINS petitions, foster care, or even community-based group homes are those who simply cannot afford other, more expensive alternatives, such as boarding schools or private therapists. Thus, the lower the family's income, and the more reluctant the community has been to assist low-income families by creating low-cost, high-quality community-based intervention settings such as group homes, the greater the rate of such court referrals tends to be. Furthermore, the poor in general have less access to traditional psychiatric services; they are therefore less able to get professional help for their problems. More importantly, psychiatric help in its current state can actually be of little use in the face of the daily stresses for many poor families. In sum, poverty appears to place a family in a unique situation by both causing problems and subsequently preventing their successful resolution. Moreover, social service and criminal justice systems may react less favorably to victims from these families than they do to more affluent youths. This differential treatment may be in part a function of bias against different cultures and styles of interaction, and in part a response to the more severely impaired psychological health among long-term victims who are more likely to appear in courts than are short-term victims.

A further barrier for abused adolescents arises from the developmental inappropriateness of many services. For instance, often no one asks for the consent of the teenager when the placement decision is made. Effective grievance procedures for an adolescent are virtually nonexistent. Other sources of help, such as family counseling, are only effective with parental cooperation. Independent living for older adolescents can be a third alternative, but this option too is almost totally dependent upon parental approval. For an adolescent struggling with issues of identity and autonomy, such modes of service can be detrimental to healthy development. Further, even if concerned and caring relatives are willing to take the youth in, they are not allowed to do so unless they can absorb the full cost themselves.

Finally, a very basic reason why adolescents are served so poorly arises from the fact that people enmeshed in bureaucracies work them; bureaucracies are characteristically slow, inefficient, and overburdened. Yet teenagers want quick action and they want to feel like they have a committed ally in their caseworker, not a cool professional. Just as medicine as a discipline has begun to train care professionals who specialize in adolescent health issues, social service workers need to become aware of developmental tasks involved in adolescence and approaches to working effectively with adolescents.

Recently, laws have been enacted which required the reporting of even the slightest suspicion of child or adolescent abuse by a wide variety of service providers--teachers, nurses, social workers, physicians. Yet, the lack of effective services for poor adolescents discussed in this subsection raises a serious concern. Given that laws require the reporting of even the slightest possibility of abuse, such improvements in identification and reporting of maltreatment may do a greater disservice to adolescents. The hazards and ethical problems of increasing overall reporting without the programmatic resources to provide effective and developmentally appropriate help cannot be denied.

Adolescent Pregnancy

If a teen decides to use non-prescription contraception (e.g., condoms, spermicidal foam, contraceptive sponge), two major barriers can occur. First, the least sophisticated method--i.e., condoms--are too often not displayed openly in stores; instead, an adolescent must request a store clerk to get them for him or her. Such a task can be difficult for an adult to do; the embarrassment can become exponential for adolescents. Second, any user of these methods must be relatively familiar and comfortable with their genitalia in order to use these methods effectively; adolescents are likely to have neither of those characteristics.

For those choosing prescription methods of contraception, barriers can appear in three areas: those which relate to the teens themselves, to the clinic services they utilize, and to the

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expense incurred. First, adolescent-specific issues include the lack of special outreach and aggressive follow-up designed to insure awareness of the options and heighten compliance with the required regimen of contraception. In addition, many teens avoid physicians and clinics because they believe (rightly or wrongly) that parental consent is required (Chamie et al., 1982). Second, aspects of the clinics can put up barriers: too few clinics, with fewer after-school, evening, and weekend hours, and staff which are untrained in working with adolescents, can make service utilization very difficult for adolescents (Chamie et al., 1982). Finally, prescription methods are very expensive--not only the supplies themselves, but the required medical visits as well. Moreover, many clinics do not accept Medicaid, thereby restricting poor teens' options (Chamie et al., 1982; Orr, 1984).

Third, all contraceptive method currently available in the U.S.--prescription and non-prescription alike--are developmentally inappropriate for all adolescents. All require high levels of motivation, careful planning, and vigilant responsibility in order to be utilized effectively. Yet many adolescents have not yet developed the cognitive skills required to comply to the necessary contraceptive regimen. In addition, pregnancy is a probabilistic event, with a number of variables--seen and unseen--which determine whether a teen will become pregnant as a result of any one act of intercourse. Moreover, adolescents females often have non-ovulatory and irregular periods, further enhancing the probabilistic nature of the event. These facts in tandem often lead teen-age women to believe that they are actually infertile and simply don't need to use any sort of contraception. Furthermore, given the often disruptive and chaotic environment accompanying those living in poverty, contraceptive techniques such as those now available are undeniably inappropriate for poor adolescents.

Finally, one cannot discuss barriers to the prevention of adolescent pregnancy without indicting aspects of society as well. An intergenerational view of teen parenthood holds that when young mothers have children, they pass on to their children a norm that having children at a young is perhaps not expected, but certainly can be acceptable. In reality, though, no evidence exists to support the direct intergenerational transmission of fertility norms. On the contrary, logic dictates that when no change occurs in the life circumstances of a welfare mother from one generation to the next, one would easily anticipate the persistence of these behaviors (Franklin, 1988). Moreover, the issues of male unemployment and female participation in the labor force have too often been overlooked as causal factors of adolescent pregnancy. To predict nonmarital pregnancy decisions, the quality of the marriage market must be a key factor. The ratio of "marriage-eligible" males to unmarried females, and the economic utility of marriage as measured by male unemployment rates, both can be strong influences on decisions concerning the outcomes of pregnancies outside of marriage for adolescents and adult women alike. In addition, females who worked prior to the birth of their first children were able to work longer. Those who had delayed first

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births also obviously had the opportunity to work for a longer period beforehand, to cultivate critical job skills, and to generate stronger employment histories (Franklin, 1988). If they decided to re-enter the job market after their children were born, these mothers did so from a much stronger position than did those who had children earlier in life.

Clearly, joblessness among both males and females must be a salient issue in any policy agenda designed to reduce pregnancy in low-socioeconomic status female adolescents. Moreover, efforts must be made to increase minority adolescents' job skills and their employment rates. To that end, efforts which increase high school graduation rates, in tandem with making high-quality education in inner-city public schools more available, could enable adolescents living in poverty to be more competitive in the job market (Franklin, 1988). By helping low-income adolescents--especially young men--enter the world of work better prepared, the economic utility of marriage increases dramatically. This increase also raises the likelihood that females will be motivated to postpone first births and that the percentage of nonmarital births will decrease.

Summary

Barriers to service delivery and utilization for adolescents living in poverty appear to fall into five different categories. First, issues of the developmental appropriateness of the services provided are present for all adolescents; however, the harm of inappropriate services is heightened when they overlaid onto the often chaotic and unpredictable environments in which many poor adolescents live. Second, economic concerns plague the poor adolescent in seeking help: services which require either insurance or cash payments are likely to be shunned by poor adolescents. Third, geographic barriers can be sizable for adolescents in poor communities: long distances to various clinics, and expensive, inadequate, or undependable transportaion work together to discourage teens from attending the various clinics, regardless of cost. Fourth, cultural issues are rarely acknowledged and capitalized on; instead, service providers try to mold teens with "unusual" customs into "good patients". Finally, societal problems keep adolescents living in poverty from seeking the appropriate preventive care: concerns with low wages, joblessness, and suitable and enhancing futures detract from teens' interests in seeking care on anything other than a crisis-oriented basis.

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The Health of Rural Adolescents

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EXECUTIVE SUMMARY:

IMPORTANT FACTS ABOUT THE HEALTH OF RURAL AMERICAN ADOLESCENTS

1. About one-third of all youth aged 10 to 18 live in nonmetropolitan communities.

2. The rural-urban distinction is not as useful for most planning purposes as is regional differentiation, but little research is available to identify regional needs. Ruralness itself might be better conceptualized as a psychological than a demographic variable.

3. There are few sizeable rural-urban differences in adolescent health. When differences do exist, they often reflect more powerful confounding variables (e.g., social class; regional differences).

4. There is a substantial rural-urban difference, though, in the rate of unintentional injuries, both fatal and nonfatal. This difference may reflect failures in public policy, at least from a public health perspective, in regard to (a) regulation of youth labor in the agricultural sector (and

related product safety issues), (b) gun control, (c) rural highway safety, and (d) preparedness for medical emergencies.

5. Contrary to the usual image, rural America is disproportionately affected by social and economic change.

6. There is some evidence that adolescent girls are especially likely to experience social and mental health problems when there is rapid community change.

7. The farm crisis of the 1980s has had a severely negative effect on the well-being of families in farm communities. The incidence of depression among adolescents in such communities appears to have risen sharply.

8. One of the areas in which there is a substantial rural-urban difference is with respect to delinquency rates, with rural rates lower than urban rates. However, delinquency is rising faster in rural than in urban communities, and both licit and illicit substance abuse rates are similar between nonmetropolitan and metropolitan areas. Broad rural-urban

differences in rates of substance abuse appear less pronounced than idiosyncratic community and regional differences. Regardless of community size, there is a "syndrome" of psychosocial factors related to delinquency, substance abuse, and other antisocial and risk-taking behavior among adolescents.

9. Use of smokeless tobacco is a rising health problem among adolescents, perhaps especially in rural communities.

10. Rural adolescents use health services less frequently than urban peers, and they are less often covered by insurance. Health services are even less likely to be available to rural than to urban uninsured families.

11. Federal financing of rural health and community development services has been disproportionately low, a problem that may have been exacerbated by the movement to block grants. Public assistance programs are less likely to apply to disadvantaged rural families, because poor parents in rural communities commonly are employed for at least part of the year and married and living together.

12. Health and mental health specialists are largely unavailable in rural areas. Given the subspecialty status of adolescent health and adolescent mental health, specialized, professionally staffed adolescent programs (at least those identified as being in the health sector) are largely nonexistent in rural communities.

13. Well-planned nonprofessional programs to alleviate social and behavioral problems of adolescents are at least as effective as professional programs. Given gaps in professional services, they appear especially well suited to rural communities, although evaluation studies conducted in rural communities are generally unavailable.

14. The social support and community involvement that accompany "undermanning" also may serve as strong foundations for informal or nonprofessional youth programs. The 4-H tradition within the Cooperative Extension Service fits well here.

15. The fractionation of agency responsibility and the lack of systematic planning that are endemic to youth services are especially troublesome in rural communities.

16. New training and service programs for "generalists" in youth services (rather than adolescent health, adolescent mental health, juvenile justice, youth welfare, etc.) offer promising cost-effective responses to the needs of rural youth and the ecology of rural communities.

17. Although rural-urban differences in values are not strong, the tendency toward social conservatism is sufficiently pronounced among many rural populations that it should be taken into account in planning health services (e.g., development of family planning services; allocation of decisionmaking authority).

18. Transportation difficulties are major impediments to health services for rural adolescents, particularly when there is a desire for confidential services.

19. In a developing area like adolescent health, there may be especially difficult problems of diffusion of new knowledge and practices to rural providers.

20. Although the population of rural America is predominantly White, planning for rural health services must take into account the substantial ethnic-minority populations in some regions. For example, the majority of Native Americans live in rural communities, and large numbers of Blacks live in the rural South and Hispanics in the rural Southwest. Much of the disproportionate poverty of rural America is accounted for by such communities.

THE HEALTH OF RURAL ADOLESCENTS

WHO IS RURAL? WHAT IS RURAL?

As a beginning point in considering the health status of rural adolescents, it is useful to identify the bounds of the rural population. For several reasons, the definitional question is not merely academic (see Hewitt, 1989). First, if the definition varies, results cannot be aggregated across studies. Second, if the definition fails to capture ruralness as it is intuitively understood (whether as a psychological or a geographic variable), then planning for rural services may not adequately address the special needs of rural individuals and communities. In other words, if the sample is not representative of rural people (as they themselves or others define them), erroneous conclusions may be reached. Third, when research definitions do not match statutory definitions of rural (which themselves are inconsistent, even within the authorizing statutes for a single agency; see Hewitt, 1989), there may be difficulty in directly generalizing the findings to policy.

The predominantly used definitions focus exclusively on population density. According to the U.S. Bureau of the Census, rural communities are those with a population of fewer than 2,500 persons. The definition relied upon by the U.S. Office of Management and Budget (OMB) subsumes the counties within the immediate economic sphere of an urban center. OMB thus dichotomizes localities between "metropolitan" and "nonmetropolitan" (rather than "rural" and "urban") on the basis of their inclusion in a standard metropolitan statistical area (SMSA), consisting of a central city or twin cities of at least 50,000 people and contiguous counties that are economically integrated with the central city.

The overlap between the definitions is far from perfect. In the 1970 census, 12% of people living inside SMSAs (and thus defined as "metropolitan") were "rural," and 43% of residents of areas outside SMSAs ("nonmetropolitan") were "urban." Various combinations of Census and OMB definitions and various cutoff points for urban (e.g., 5,000 instead of 2,500) lead to markedly different distributions of rural communities with identifiable clusters of level of ruralness (Jordan & Hargrove, 1987; Perlman, Hartman, & Bosak, 1984; Pickard, 1988).

Not only do the official definitions transform a continuous variable into a dichotomous one, neither definition takes into account the degree of isolation as well as population density. Indeed, it is arguable that neither line demarcates the rural population on the basis of a conceptually derived rule. The criteria for an SMSA were constructed in 1940 when cities of greater than 50,000 population were more unusual than they are today and before metropolitan areas sprawled with most workers commuting to, rather than living in, central cities (Pickard, 1988).

One result of the inadequacy of the official definitions is that much of the research on rural phenomena relies purely on intuitive classifications (e.g., a school system in the rural Ozarks). Such implicit typologies fail to resolve the problem of the bounds of the rural population.

Whatever the definition used, studies often have not been easily interpretable in terms of gross rural-urban differences. Apparent rural-urban differences may reflect the influence of more powerful variables (e.g., social class; region) that happen to be correlated with population density. The problem with assuming that rural-urban differences are truly meaningful in those terms becomes apparent when one remembers that the rural population is quite diverse overall, even if the rural population within a given region is relatively homogeneous (Cordes, 1989; Muscovice, 1989).

This point is illustrated simply by doing a mental list of states that commonly are regarded as rural: e.g., Alaska, Hawaii (exclusive of Oahu), Mississippi, Nebraska, Nevada, Utah, Vermont, West Virginia. The ethnic composition, per capita income, economic base (e.g., proportion of the population in agriculture), and social, religious, and political traditions of those states differ enormously. So too do the relative youthfulness of their populations and the nature of their demographic trends (e.g., whether immigration or emigration is occurring). As has been noted previously with some understatement, "There are obvious differences in the ecology of the exurbs of New Jersey and Connecticut, the hollows of eastern Kentucky, and the expanses of the Western deserts" (Melton & Childs, 1983, p. 428).

Nonetheless, few studies of rural-urban differences have sampled from a sufficiently broad range of rural regions to identify with confidence those phenomena that truly are rural rather than regional. Compounding the problem, many of the most careful epidemiological studies of rural communities have been conducted in apparently atypical areas--often island cultures (e.g., Kauai; Martha's Vineyard; Isle of Wight).

Moreover, studies that were conducted in states commonly identified as rural cannot be easily synthesized to give a picture of rural America, because the population even in very sparsely populated states is commonly predominantly urban (e.g., 65% of Alaskans and 85% of Nevadans are urban). Rural residents constitute a majority in only seven states (Photiadis & Simoni, 1983).

At root, the definitional issue is one of separating the geographic and psychological meanings of "rural" (Melton, 1983c). Residence in a rural community and identification (whether by oneself or others) as a rural person are not necessarily coextensive. As illustrated by the persistence of Appalachian identity among many immigrants from central Appalachia to the cities of the upper Midwest, individuals can be identified as rural by themselves or others without living in an area defined as rural by the Bureau of the Census. Conversely, some "cosmopolitan" individuals may evaluate themselves exclusively in terms of urban norms, although they live in a very sparsely populated, remote area. In fact, population of one's community of residence is highly related to perceptions of ruralness of place but not of self (Melton & Hargrove, 1987). Images of rural and urban people are much less articulated than are constructs of rural and urban places.

Particularly given evidence for cross-generational and developmental influences of place of residence and for limits on the population sharing rural values, even within small communities (Melton, 1983d; Melton & Hargrove, 1987), the critical question may be better framed in terms of who, rather than what, is rural (Dillman, 1982). For some purposes, individual differences may be a more useful framework than community differences when considering the nature of ruralness. For example, if values or expectancies of rural youth suggest a need to alter the nature of health services to accommodate such differences, "rural" characteristics may be a better indicator than residence in a rural community of a need to alter treatment plans. On the other hand, when considering issues related to the distribution of health professionals or the organization of emergency services, differentiation of rural communities is probably more useful than study of the population of rural individuals.

Determination of the relative utility of the approaches will occur only when researchers begin to examine more carefully the development of a rural identity and the characteristics of individuals so identified. Therefore, reflecting the convention in most of the literature, this report generally will focus on the characteristics of youth living either in rural communities (as classified by the Census Bureau or the researcher's intuition) or nonmetropolitan communities (as classified by OMB).

DEMOGRAPHIC CHARACTERISTICS

Age

In 1984, about 10.8 million 10- to 18-year-olds lived in nonmetropolitan areas, about one-third of all youth in that age group and 15.3% of the total nonmetropolitan population (McManus, 1989; McManus & Newacheck, 1989; Norton & McManus, 1989).[1] Ten-to 18-year-olds constitute a slightly smaller proportion of the metropolitan population (13.9%).

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[1] Except where otherwise indicated, we will use the term "adolescent" to refer to 10- to 18-year-olds. We are indebted to Margaret McManus for making available unpublished urban-rural analyses of national health survey data. More refined comparisons of subsets of the adolescent population (e.g., early versus middle versus late adolescents) are unavailable.

Social Class

Interpretation of rural-urban differences often is muddied by the question whether apparent rural-urban differences merely reflect a correlated variable. Notably, given the strikingly disproportionate prevalence of poverty in nonmetropolitan areas (Moland & Page, 1982), "rural" phenomena often simply are those that are associated with low income and social status. In 1984, 19.3% of adolescents in nonmetropolitan areas lived in poverty, compared with 15.5% in metropolitan areas (McManus, 1989), but the difference in median family income between metropolitan and nonmetropolitan areas is more striking ($30,045 versus $21,956 in 1985; Norton & McManus, 1989) and substantially greater proportionately than the difference in the cost of living. Estimates by the U.S. Department of Agriculture (reported in Office of Educational Research and Innovation, 1988) of the cost of rearing a child from birth to age 18 vary relatively little: in 1986 dollars, urban lifetime cost, $92,228; rural lifetime cost, $85,915.

Rural-urban differences in the poverty rate increased in subsequent years as the farm crisis worsened. The proportion of nonmetropolitan counties with unemployment greater than 9% rose from 5% in 1979 to nearly 50% in 1984, a statistic that is deceivingly low because unemployment statistics do not include individuals who have lost their farms (National Mental Health Association, 1988). Between 1981 and 1985, 500,000 jobs were lost in rural America, and almost half of the rural workforce remains unemployed or underemployed (DeLeon, Wakefield, Schultz et al., in press). Nonetheless, poverty in rural America is largely associated with the "working poor." At least one adult is employed in most rural poor families (U.S. Congress, 1989).

Therefore, the broad contemporary problem of rural poverty is one of intermittent poverty as the rural economy waxes and wanes. This point is important to remember because the common characteristics of rural poor families--working and two parents present--render them ineligible for many social programs (including Aid to Families with Dependent Children and, therefore, Medicaid), but their low-level and transient employment and self-employment also make private-sector benefits relatively scarce. Because many rural poor people are taxpayers, the already large difference in median income between metropolitan and nonmetropolitan families is actually deceptively small, because the disposable (after-tax) income of rural poor families typically is lower than that of urban poor families (Cordes, 1989).

Given the disparity in incomes between rural and urban residents, it is unsurprising that the standard of living of rural residents is often low. Two-thirds of the nation's substandard housing is found in rural America (DeLeon, Wakefield, Schultz et al., in press).

In short, poverty is an important and perhaps dominating factor in explaining rural-urban differences. At the same time, it is important to remember regional differences in the economic well-being of rural families, particularly when severity and chronicity are taken into account. Although economic distress spread at an alarming rate across the rural Great Plains in the mid-1980s, persistent rural poverty is largely a phenomenon of "pockets" in the rural South--specifically, Central Appalachia and predominantly Black counties in the Southeast, Native American communities in the Plains and the West, and Mexican-American communities in the Southwest (Moland & Page, 1982). Ninety-four per cent of the nonmetropolitan persistent low-income counties in the United States are in the South.

Ethnicity

Rural America is predominantly White. Nonwhites comprise 19% of the population of adolescents in nonmetropolitan areas, compared with nearly one-third of the analogous metropolitan population (McManus, 1989). Nonetheless, as already noted, some specific rural regions have large proportions of Blacks and Hispanics. Moreover, the majority of Native Americans live in rural areas (Meketon, 1983).

Occupation

The popular image of rural America emphasizes occupations reliant on natural resources--agriculture, forestry, mining, and fishing--but only 7% of nonmetropolitan workers do such work (Norton & McManus, 1989).[2] Rural residents are several times more likely to be factory workers than farm workers (Coward, DeWeaver, Schmidt, & Jackson, 1983). Moreover, the depressed farm economy in the 1980s has accelerated the trend away from agricultural employment, especially on family farms. During the past decade, about 1,000 farms have gone out of business every week (U.S. Congress, 1989; Wagenfeld & Buffum, 1983).

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[2] Although it is a mistake to think of extractive industries as dominant throughout rural America, such sectors of the economy may still deserve special attention for two reasons. First, because such industries are dominant in particular rural areas, some parts of the country are particularly vulnerable to adverse economic effects when natural resources begin to be depleted so that the viability of the industry is in question or, conversely, when there is a glut of such resources and prices fall accordingly so that extraction is no longer profitable. Such vulnerability is important not only because the tax base for health services is fragile, but also because workers in unstable industries are less likely to be insured consistently (Kronick, 1989) and they and their families are apt often to be affected by the adverse health consequences of unemployment and underemployment. Second, the extractive industries that are virtually unique to rural areas (i.e., agriculture, mining, and timber) are among the most dangerous occupations (DeLeon, Wakefield, Schultz et al., in press). Therefore, job-related injuries--and stress related to the threat of such injuries to oneself or one's close relatives--are ongoing health concerns among the families of employees in such industries.

In short, the distribution of occupations held by rural workers does not differ markedly from the distribution of jobs in the urban workforce. Two exceptions apply to that general conclusion. First, consistent with the substantially lower median income in rural areas, rural areas have a disproportionately smaller share of professional and managerial jobs (Cordes, 1989). Second, although the range of occupations in rural areas is broad in the aggregate, individual rural communities are likely to have a limited array of opportunities for employment. Accordingly, rural communities are especially susceptible to "boom-or-bust" economies and therefore to have a fragile economic base for public services.

Region

When rural-urban differences are reported, as is common, without disaggregation by region, such differences often tell more about the relation of the South to the rest of the country than about phenomena that are generalizable across rural communities. Almost half (46.2%) of nonmetropolitan youth live in the South, with half of the remainder (26.5% overall) in the Midwest (Northeast, 13.7; West, 13.7%) (McManus, 1989).

The few studies of child and adolescent development and family life that have included comparisons of rural regions suggest that regional differences in attitudes and values may be more important than gross rural-urban differences. For example, familism,[3] a characteristic often ascribed to rural culture, has different meaning in various regions in the United States, particularly with regard to the importance of extended kin (Heller & Quesada, 1977). Identification with a regional culture may shape one's worldview (Smith & Bylund, 1983) and childrearing style, as in central Appalachia, where parents tend to reinforce a passive coping style in their children (Gotts, 1980).

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[3] Familism refers to a value structure in which the family is particularly central in one's social comparisons and social network. Thus, familistic individuals may emphasize family harmony above all other values, live in close proximity to extended kin, and pay relatively little attention to social reinforcement outside the family.

Such cultural differences have been said to underlie variation in skeptical attitudes toward "scientific" medicine and, accordingly, to explain the low medical utilization rate in the rural South (Hill, 1988). The latter example also illustrates the need to disentangle covariation; such attitudes apparently are specific in the United States to a subset of people who are Southerners and rural and poor. Simple univariate comparisons would fail to illuminate such relationships.

Beyond differences of regional culture, failure to consider regional differences in rural economy also is likely to mask important facts relevant to health planning. For example, the economic standing of rural community health centers declined precipitously between 1986 and 1987 (Joint Rural Task Force, 1988). Their cash position decreased by $28.7 million, as a result of increases in bad debt (up 25%), subsidies of uninsured patients (up 11%), and caseload (up 7.8%) and, therefore, operating expenses (up 14%). Attention to these dire overall figures might lead one to ignore the fact that rural community health centers in two (Regions V[4] and IX[5]) of the ten regions of

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[4] Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

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[5] Arizona, California, Hawaii, Nevada, Guam, Samoa, and Wake Island.

the Department of Health and Human Services actually showed a gain in their cash standing. Region VII, consisting of several Corn Belt states (Iowa, Kansas, Missouri, and Nebraska), showed a much greater increase in caseload (35.7%) and sliding-fee discounts (27.8%) than the other regions (presumably reflecting the trouble in the agricultural economy), but its bad debts actually decreased by half, a seemingly inconsistent finding that the Joint Rural Task Force attributed simply to tightened management.

TRENDS IN RURAL AMERICA

Change as a Factor in Rural Life

The regional differences in economic well-being and the rapid changes in the public health care system in some rural communities indicate the dynamic quality of rural life. By contrast, the popular image of rural America is that it is stable--more or less impervious to the trends that create social instability in metropolitan areas. Such a view is clearly erroneous. Boom-or-bust economies are largely a rural phenomenon (see, e.g., the community studies in Friedberger, 1988), and the trends in America as a whole eventually can be seen in rural America.

Social change is likely to reverberate particularly loudly in rural communities. The undermining of traditional institutions probably has greater consequences for rural than urban life, simply because there are fewer institutions in rural communities. Notably, rural crime, including antisocial behavior by and toward youth, is rising at a much faster rate in rural than urban communities, even though the frequency of crime remains lower in nonmetropolitan areas (Melton, 1983a; Phillips, Donnermeyer, & Wunderschmidt, 1982). Fear of rural crime is rising even faster, especially in boomtown settings (Krannich, Greider, & Little, 1985; see also Lee, 1982, documenting high levels of fear of crime among elderly farm residents).

The Changing Structure of American Agriculture

The significance of change in rural America has been particularly vividly illustrated by the economic problems in many rural areas as a result of the farm crisis (see generally Falk & Deseran, 1986). Such problems have created an unstable environment with negative health consequences (e.g., increased substance abuse) for adolescents as well as other family members. As a task force of the National Mental Health Association (1988) recently summarized:

> the 1980s have seen the beginning of a restructuring of rural America similar to the massive changes that followed the 1930 depression and those that occurred during the industrial revolution in this country. Great social and economic forces are drastically changing today's rural environment. In many ways this change represents a literal shrinking of population, businesses, services (schools, churches, health care, human services, mental health care,

> etc.), economic base, tax base and employment opportunities. (p. 13)

The social fallout from the farm crisis has rested disproportionately with youth. Families with children in the teens have been the most vulnerable to foreclosure. The greatest economic distress has been experienced by young farmers with large families (Bultena, Lasley, & Geller, 1986; Murdock, Albrecht, Hamm et al., 1986), who typically have had less favorable debt to asset ratios than more experienced farmers. The level of economic distress experienced by farm families, including farm youth, has been shown to be directly correlated with their psychosocial stress (Bultena, Lasley, & Geller, 1986).

There is substantial evidence that farm youth have been at greater risk in recent years. Researchers have documented a substantial increase in alienation, aggressiveness, depression, and poor school performance in adolescents (see, for reviews, Beeson & Johnson, 1987; National Mental Health Association, 1988). Increased depression has been observed through both general-population surveys and analyses of changes in clinic caseloads across time.

Interviews of farm youth in Iowa (Van Hook, in press) revealed both resilience and vulnerability, with greater worries and more confusion about identity as the farm lifestyle was threatened and gender roles changed rapidly to meet economic needs. Although participants commonly were experiencing depression, anxiety, and psychosomatic problems, many also had a new seriousness reflected, for example, in making the honor roll for the first time. Almost three-fourths reported that their primary means of coping with the family stress was to contribute directly to the family welfare. The other major coping mechanisms were staying away from home more or, conversely, staying at home more. Staying out more was especially common among youth in families with particularly great stress.

The participants in Van Hook's survey frequently reported feeling helpless and guilty and in some sense responsible for their family's well-being. More than 80% described life as unfair. The majority, especially the girls, reported increased actual responsibilities in the family, often because their mothers had taken new jobs or increased off-farm working hours to meet the family's financial needs. Stress was increased by information gaps, as only half learned about the nature of the family problems directly from their parents. The majority of youth had not disclosed their concerns even to their closest friends, so that youth often were unaware that their peers were experiencing many of the same problems and reactions. Thus the problems related to family financial instability apparently were exacerbated by cultural norms related to self-reliance and possibly related attributions of personal responsibility for adverse events.

Apart from change related to the recent farm crisis, perennial instability in many rural communities has resulted from constant migration away from such communities and, during the 1970s, reverse migration (see Brown & Wardwell, 1980) as the dominant rural industries in particular regions have "busted" and "boomed." Such instability leads to disruption of existing social networks for long-term residents, establishment of a substantial group of people who are not part of any networks, strains on the service system (which typically will not expand or change at the same rate as the social structure), and new demands to which to adapt. In rapid-growth communities, a challenge exists for development of services for "outsiders" who may have few informal social supports available to them (Mooney & Eggleston, 1986). The possible difficulty in achieving full integration of outsiders into social networks in some rural communities is illustrated by a study of 25 rural communities in Montana that showed that individuals who had lived in the state for more than a decade but fewer than 20 years still typically labeled themselves as "newcomers" (Weinert & Long, 1987).

The adaptive demands and the resulting mismatch between such demands and personal behavioral repertoire are apt to be especially acute for rural youth, both those who have lived all their lives in rural communities and those who are newcomers and may not identify themselves as "rural." Youth in rapidly changing communities are faced with a substantial increase in heterogeneity of social roles and a possible decrease in social support as a result of rapid community growth at the same time that they are involved in developmentally appropriate conflicts about establishment of an identity.

Perhaps as a reflection of especially pronounced changes in gender roles as a result of economic expansion, comparisons of rural Utah communities showed that 9th- and 10th-grade girls in rapid-growth communities experienced many more personal problems than peers in slow-growth communities (Osborne, Boyle, & Borg, 1984). The effect was observed in several domains: health, physical development; courtship, sex, marriage; morals, religion; home and family. Self-reported problems of 9th- and 10th-grade boys and 6th-grade boys and girls did not differ as a function of community growth.

More generally, simply because the range of institutions and social situations is relatively narrow in small communities, change within rural communities is likely to have a greater impact than comparable change in larger communities. Wilkinson (1986) elaborated this point in his presidential address to the Rural Sociological Society. Although the reputation of rural America is for conservativism and, therefore, social and political stability (even rigidity), Wilkinson noted that the gaps in institutional structures in small communities create a climate for "fragmentation and isolation between segments of even the smallest communities" (p. 7).

Such alienation and social instability may have been heightened in recent years because of changes in the locus of power in many rural communities. As ownership of resources has moved further from the community itself, attachment to rural social institutions may have diminished accordingly:

> Paralleling...[the] loss of the family farm has been the growth of corporate enterprise in rural America. The negative effects of oligopolistic practices on the quality and cost of food are important considerations for everyone, but the primary issue for community mental health centers (and indeed for all areas of rural public policy) is the

> shift of the locus of political control from rural residents to urban economic interests. Increasingly, rural people are losing power to control rural resources and rural sociopolitical systems; their historic emphasis on individualism and self-determination has been seriously eroded. (Wagenfeld & Buffum, 1983, pp. 99-100)

Because of the significance of such institutional anchors for adolescent personality and social development (Coles, 1986; Erikson, 1968; Melton, 1987a), it would be unsurprising to find that the profound changes in social, economic, and political structures in many rural communities in recent years have taken a toll in the well-being of rural youth. As discussed later in this report, some evidence exists from recent mental health epidemiological studies to support such a hypothesis.

THE ASPECTS OF RURAL ECOLOGY THAT SUPPORT HEALTHY BEHAVIOR

Although it is appropriate to note such special points of vulnerability in rural communities, it is also useful to note the ways that small communities are especially conducive to healthy behavior. In general, rural communities are viewed as desirable places to live, in large part because of a greater sense of neighborliness and a lower rate of crime than in more densely populated communities (Korte, 1983; Wilkinson, 1986). In a setting that is "undermanned,"[6] people are more likely to feel an environmental "demand" or "press" to be involved (Barker, 1960). Therefore, they are more likely to be satisfied with the setting, to be active participants within it, and to respond to others' need for help.

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[6] Although the term undermanning has unfortunate sexist connotations, it represents an established theory of the ecology of small settings. Because "undermanning" is a term of art, we will use it rather than "underpopulated."

Some observers have suggested that rural communities thus are especially well suited to informal service systems based on natural helpers who provide support necessary to sustain neighbors through crises (Heyman, 1983; Libertoff, 1979). Four-H, administered through the Cooperative Extension Service of land-grant universities and one of the few programs especially directed toward rural youth, relies on such a combination of volunteerism and youth participation (see Ladewig & Thomas, 1987). Particularly in those rural communities without formal mental health or social services, virtually all adults view themselves as at least occasional help-givers, and they perceive talking with natural helpers in the community as helpful and desirable (Young, Giles, & Plantz, 1982).

Undermanning appears to be a phenomenon that is generalizable across rural communities, that is likely to have positive health consequences, and that may serve as a foundation for nonprofessional youth services. By definition, undermanning is negatively related to population density; it occurs when there are more roles to be filled than there are people to fill them. In such a setting, it is hard to remain on the sidelines, to be to be active participants within it, and to respond to others' need for help.

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Undermanning appears to be a phenomenon that is generalizable across rural communities, that is likely to have positive health consequences, and that may serve as a foundation for nonprofessional youth services. By definition, undermanning is negatively related to population density; it occurs when there are more roles to be filled than there are people to fill them. In such a setting, it is hard to remain on the sidelines, to be unnoticed, or to feel unimportant. Therefore, undermanning is positively associated with personal involvement and control, variables that are known to be related to physical and mental health status (see generally Perlmuter & Monty, 1979).

However, undermanning is not a necessary feature of the settings in which rural youth find themselves. Within a given rural community, social organization may have been altered in a way that attenuates undermanning and its effects. Notably, consolidation of schools is known to increase the alienation of youth and to result in related behavior disorders and psychosomatic problems (Barker & Gump, 1964; Garbarino, 1980). Students who formerly were "big fish in a little pond" and active participants in diverse activities often are unhappier and less self-confident in large schools, and a substantial proportion of students in large schools are seldom involved in school activities other than as observers.

Moreover, it should be remembered that there are limits to the degree that social support can alleviate stressful situations. Extended-kin support is ineffective in buffering against high risk of depression among late-adolescent and young-adult Black women in the rural South, apparently because of the overpowering influence of persistent economic stressors

(Dressler, 1985). Similarly, in farm communities on the Great Plains in which economic distress was rampant in the mid-1980s, community support for families in crisis was not reliable (Heffernan & Heffernan, 1986). When the resources of the community have been drained, social and emotional support is likely to be insufficient, no matter what the community's sense of responsibility for help for its members in distress.

THE ASPECTS OF RURAL ECOLOGY THAT EXACERBATE RISK FACTORS

Although the subjective quality of life in rural communities is generally high (at least among the adults who are participants in surveys), rural communities do not fare nearly so well on many objective indicators (Korte, 1980). As will be discussed, the standard of living tends to be relatively low. Moreover, professional health services often are sparse or completely unavailable, and transportation problems may make services that are available inaccessible and, therefore, functionally unavailable.

Such difficulties are easily recognized and counted. There are other characteristics of rural communities that are subtle but that detract from personal well-being and make effective service delivery more difficult.

One phenomenon common in rural communities is a lack of conviction that one's efforts will reap personal benefit. When economic opportunities are limited, youth may foresee little chance for development of personal interests in psychologically and financially rewarding work. Consistent with that hypothesis, low academic and occupational aspirations and high school dropout rates have long been common in rural communities, especially among youth who intend to remain in their communities of origin (Coward et al., 1983; Murray, Keller, McMorran, et al., 1983). The relatively low complexity and slow diffusion of innovations in rural community also may contribute to a lack of excitement about the future. Rapid community growth and corollary influx of economic opportunities do not curb the desires of the "best and brightest" rural youth to leave their home communities (Seyfrit, 1986). Overall, such longstanding phenomena are reflected in the fact that heads of nonmetropolitan households including adolescents are somewhat more likely than their metropolitan counterparts to be high school dropouts (19.5% versus 16.0%) and less likely to have at least some college education (35.0% versus 44.5%; McManus, 1989).

In view of evidence from urban studies that a perception of limited future options is a major factor in adolescent pregnancy

(Hayes, 1987), such findings are obvious matters for concern because of their immediate consequences in the lives of youth, as well as their downstream effects in diminished adult productivity. Even when youth as young as age 10 are included in data about "adolescents," 3.4% of nonmetropolitan adolescents are married (twice as large a proportion as is found among metropolitan youth),[7] and somewhat fewer are in school (65.0%

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[7] Obviously, the proportion among older adolescents must be ubstantially higher, but data disaggregated in such a manner are navailable.

versus 69.6%; McManus, 1989). Sense of personal mastery also has been shown to be the most powerful individual trait in determining the level of coping with the farm crisis by adult men and women (Keating, 1987).

However, just as undermanning is not a necessary feature of rural settings, neither is low perceived control, even though success in some rural occupations appears literally to be the product of the forces of nature. As Lefcourt & Martin (1983) concluded in a comprehensive review of the literature on rural-urban differences in locus of control, sense of personal efficacy is a function of the opportunities in particular settings and essentially unrelated to ruralness or urbanness per se. For example, perceptions of personal powerlessness are related to the management structure of farms (perceived powerlessness being greatest among workers on farms with absentee corporate owners; Heffernan, 1972; Martinson, Wilkening, & Rodefeld, 1976) and the unionization of workers (unionized farm workers being less likely to perceive themselves as powerless; Hoffman, 1978; but cf. Rushing, 1970). Similarly, degree of parental support affects the sense of personal causation of rural middle-school students, just as it does for urban youth (Abraham & Christopherson, 1984).

Whatever fatalism (belief that "whatever will be will be," regardless of one's efforts) is present among some rural people, it is matched in others by a strong sense of individual responsibility that sometimes may interfere with acceptance of help. A study of welfare programs (AFDC/Food Stamps/Medicaid) throughout Wisconsin showed stigma to be much greater in rural communities (Rank & Hirschl, 1988). Perhaps as a result, welfare exits in rural communities were substantially more frequent and faster--an outcome that is positive in most respects but that may signal a willingness to give up needed health services (e.g., Medicaid; mental health treatment) when they are perceived as a sign of personal weakness. Moreover, the recognition that one needs help may be especially likely to stimulate depression in such a social context because of the culturally accepted attribution of personal failure.

THE EPIDEMIOLOGY OF HEALTH PROBLEMS AMONG RURAL ADOLESCENTS

Overall Prevalence

The discussion thus far makes clear that rural communities are neither idyllic nor pathogenic; both positive and negative stereotypes of rural America are only loosely related to actual conditions. Few phenomena are unique to and pervasive across rural settings, and those characteristics that do seem to be features of rural ecology include both positive and negative attributes. With such a conceptual background, the context is set for the description of the empirical realities related to the health of rural adolescents.

A key to health planning is the determination of the prevalence of health problems in a given population. Doing so in regard to rural adolescents is complicated by several factors. First, problems in obtaining representative samples are endemic to epidemiological studies of both rural and urban adolescents.

Because youth themselves typically are not in a position to seek care independently, clinical samples rarely will give an accurate picture of the self-perceived health problems of adolescents. By the same token, community surveys that rely on parent interviews or questionnaires may give a somewhat distorted view of actual prevalence, because parents may fail to appreciate problems that their children are experiencing (of course, youth themselves may deny their own problems, too). Second, families of youth with complex health problems sometimes may move to metropolitan areas solely because of a lack of specialized services. Therefore, even a general-population survey may not identify cases that originate in rural communities. Similarly, when youth are treated in metropolitan medical centers, they may not be reflected in clinical prevalence studies as "rural" cases, even though they continue to reside in rural communities. Third, synthesis of the literature on rural-urban differences is hampered by diverse definitions of rural and by failure to account for confounding variables and the heterogeneity of rural communities.

Sufficient data do exist, though, to leave two broad impressions. First, the idyllic image of rural life that persists in stereotype is quite discrepant from reality. As we shall discuss, substance abuse is unfortunately common among rural adolescents, just as among urban youth. Perhaps of even greater concern, the risk of serious trauma is especially pronounced among rural adolescents. Rural youth, especially boys, are often victims of work-related injuries as well as interpersonal violence. Whether the cause is violence or disease, the mortality rate for adolescents has been highest in rural Western states (specifically, the Rocky Mountain and Southwestern states) for decades. Indeed, the violent death rate for rural White adolescents in those states is higher than for inner-city Black youth (Greenberg, Carey, & Popper, 1987). Automobile accidents on rural highways also contribute to a mortality rate that is higher for rural than urban adolescents in the South (Wright, Champagne, Dever et al., 1985). Overall, nonmetropolitan counties account for more than one-fourth of deaths among 15- to 24-year-olds, a figure approximately the same as the proportion of the population of adolescents and young adults living in nonmetropolitan counties (McManus & Newacheck, 1988).

Second, although it is a mistake to ignore or underestimate the health risks experienced by rural adolescents, it also is true that rural youth generally are similar to their urban peers in the health problems that they experience. The most comprehensive community survey data are those collected by the National Center for Health Statistics through its National Health Interview Survey (NHIS).[8] Although there is some variation, the incidence of both acute and chronic conditions in children and adolescence is generally similar in metropolitan and nonmetropolitan areas (McManus & Newacheck, 1989). About three-fourths of both metropolitan and nonmetropolitan youth report that their health is excellent or very good, with less favorable reports coming disproportionately from youth in poverty (McManus, 1989).

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[8] The National Health Interview Survey data themselves probably contain some distortions, particularly undercounting of conditions that adolescents find embarrassing, because of reliance on parental interviews.

Perhaps reflecting differential accessibility and availability, rural adolescents, especially those who are from poor families, do use health services somewhat less frequently than their urban peers. Nonmetropolitan youth report 2.7 physician visits per year, compared with 3.2 visits annually among metropolitan youth (McManus, 1989). On the other hand, the proportion of nonmetropolitan youth who report having been hospitalized in the previous year is somewhat higher than among metropolitan adolescents (5.4% versus 3.9%). It is unclear whether this discrepancy results from differences in accessibility and availability of outpatient care, severity of health needs, or some other factor.

Prevalence studies based on clinical samples (i.e., actual cases in the health care system) confirm the impression that the health care needs of rural adolescents are similar to those of their urban peers, but that the actual use of the system varies in some respects with population density. For example, data from the 1982 Professional Activity Study of the Commission on Professional and Hospital Activities showed that the distribution of pediatric hospital patients (not limited to adolescents) varied little between rural and urban general hospitals, but that the pediatric populations of both rural and urban general hospitals differed from those of teaching hospitals and specialized children's hospitals, which receive a greater proportion of serious and complex cases (Long, Dreachlin, & Fisher, 1986). When case severity was taken into account, type of hospital accounted for only a fraction of 1% of the variance in length of stay and charges. Relative to the other types of hospitals, rural hospitals had a larger proportion of pediatric patients in diagnosis-related groups (DRGs) for respiratory disorders (17%)[9] and digestive disorders (18%). Rural hospitals also had more pediatric patients with ear, nose, and throat disorders (16%) than did teaching and specialized hospitals but fewer than did urban hospitals. The mix of disorders especially common among patients of rural hospitals may reflect their place in regionalized health care systems (i.e., as deliverers of acute care) more than it reveals actual rural-urban differences in incidence of various illnesses.

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[9] Somewhat by contrast, asthma has been reported to be somewhat less frequent among rural than urban populations (Gergen, Mullally, & Evans, 1988).

Like national surveys, studies of outpatient populations in particular regions typically have been noteworthy for their lack of pronounced rural-urban differences. For example, physician visits and hospitalizations[10] for chronically ill Medicaid-eligible minors, including adolescents, a 24-county rural area in northern Florida approximated national norms (Cook, Krischer, & Kraft, 1986). Replicating national findings that relatively few chronically ill youth account for much of the use of the health care system, mean health care expenditures were observed to be much higher than median costs. Rates of hospitalization varied substantially, both within and among DRGs (Krischer & Cook, 1985).

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[10] The children studied were sthe subjects of home interviews with their parents, but hospitalization history was recorded.

Examination of the caseloads of 12 family practices (3 of them rural) in Colorado showed that the rural practices saw more adolescents, but reasons for visits did not differ between rural and urban practices (Poole & Morrison, 1983). Most adolescent patients had one of 25 primary diagnoses. Indeed, almost three-fourths of the cases involved the three most frequent diagnoses:

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general health maintenance, 39.0%; upper respiratory tract infection, 22.1%; obstetrical care, 12.5%). Youth also often were examined for trauma (sprain, 7.9% of all adolescent patients; laceration, 6.2%; bruise/contusion, 5.1%; fracture, 2.8%), the most common reason for referral of adolescent boys. Adolescent girls often were seen for gynecological care. In addition to obstetric care, adolescents often sought assistance from family practitioners for vaginitis (4.6%), menstrual disorders (3.6%), or contraception (8.5%).

Traumatic Injuries

The major rural-urban difference in youth health problems is found in rates of serious trauma. The American Academy of Pediatrics has identified rural injuries as a major public health problem, with farm machinery being a prime culprit (Committee on Accident and Poison Prevention, 1988). As the AAP committee pointed out, youth farm labor is largely unregulated, and agriculture is surpassed in dangerousness only by underground mining (also a rural occupation).

Using national databases of the National Center for Health Statistics and the Consumer Product Safety Commission, Rivara (1985) reported substantial risks for adolescent boys in farm families. Farm injuries take many lives each year: ages 10-14, 22.4/100,000 boys, 3.6/100,000 girls; ages 15-19, 30.9/100,000 boys, 1.3/100,000 girls. The majority died without ever reaching the hospital (54.5% of 10- to 14-year-olds; 62.1% of 15- to 19-year-olds). Many others were dead on arrival (20.6% of 10- to 14-year-olds; 14.6% of 15- to 19-year-olds). Fatalities resulted most commonly from machinery-related injuries (especially involving tractors), drownings, and firearm accidents. Indeed, rural male adolescents are the population at highest risk for accidental gunshot wounds (Morrow & Hudson, 1986).[11]

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[11] There is reasonable confidence that the cases Morrow and Hudson's own sample indeed involved accidental firearm fatalities. The initial set of cases included those that the North Carolina chief medical examiner's office had certified as accidental, but case records also were reviewed directly. Any suspicion of homicide or suicide was followed up with inquiries to knowledgeable sources (e.g., investigating police).

Nonfatal farm injuries also are predominantly a problem for boys (Rivara, 1985). The frequency of such injuries increases with age for boys but not for girls. Annually, many farm injuries of adolescents are treated in emergency rooms: 10- to 14-year-old boys, 1,607, and girls, 372; 15- to 19-year-old boys, 2,790, and girls, 286. Almost one-fourth of the injuries involve fingers.

The problem of the high incidence of injuries to rural adolescents is exacerbated by unfamiliarity of many rural health professionals with management of severe trauma (Smith, 1987). Of fatally injured patients reaching the emergency room alive with injuries (other than injuries to the central nervous system) sustained in traffic accidents in Vermont, almost one-fourth of deaths were judged by a panel of reviewing surgeons to have been preventable (Certo, Rogers, & Pilcher, 1983). Errors occurred most frequently in initial blood volume replacement, airway-respiratory control, and recognition of surgical urgency.

In addition to severe trauma, farm youth are vulnerable to more subtle injuries related to use of farm machinery. Notably, the majority of youth working on farms experience some noise-induced hearing loss (Broste, Hansen, Strand et al., 1989). The greater probability of loss is in the left ear, consistent with loss induced by the noise of tractors. (Drivers commonly observe their work over their right shoulder, thereby shielding their right ear.)

Taken together, epidemiological studies of injuries to rural youth suggest failures of public policy, at least from a public health perspective, in four respects: (a) protection of youth involved in farm labor; (b) gun control sufficient to prevent accidental wounds; (c) promotion of rural highway safety; (d) assurance of preparedness for medical emergencies in rural locales. Unfortunately, the economic downturn in rural states in recent years may have increased the risk of serious accidental harm to adolescents. As rural hospitals have closed, emergency response time may have diminished in many remote areas. At the same time, vulnerability to injury may have increased:

> With the economic pressures facing many farmers, exposure of children to noisy and hazardous machinery could be expected to increase. Adolescent and teen-aged children often fill roles previously held by hired help. As farmers and their spouses take jobs off the farm to supplement income, farm children take on increasing responsibility for farm operations [a phenomenon documented by Van Hook (in press)], and may be at increasing risk of hearing loss and other occupational health hazards of farming. (Broste et al., 1989, p. 622)

Mental Health Problems

The morbidity and mortality associated with accidental injuries to rural youth suggest the significance of risky behavior in determining the physical well-being of adolescents.

Many of the major health problems of adolescence--e.g., substance abuse and pregnancy--emanate from maladaptive behavior.

Beyond its significance in physical health, mental health is, of course, a matter of great importance itself. Unfortunately, data on the prevalence of mental health problems among rural adolescents are scant. The National Action Commission on the Mental Health of Rural Americans (National Mental Health Association, 1988) recently recommended that the National Institute of Mental Health (NIMH) initiate a program of research on the mental health of rural adolescents. The commission based its recommendation on a finding

> that despite the seriousness of mental health problems in rural America, NIMH has done few if any studies on mental illnesses in rural areas nor has it encouraged researchers to undertake such studies. Only one of the five epidemiological catchment area studies included any data on rural populations. The commission found that in 1978 the President's Commission on Mental Health noted the dearth of research and statistics on rural mental health. Unfortunately 10 years later, that situation has not

> improved. (National Mental Health Association, 1988, p. 33)[12]

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[12] The dearth of data on mental health of rural Americans is nearly matched by the paucity of research on child and adolescent mental health in general (Institute of Medicine, 1989).

The few behavior-epidemiological studies of adolescents that have included rural-urban comparisons have shown somewhat more risk in urban communities. The most notable example comes from Rutter's work (see, e.g., Rutter & Sandberg, 1985), which has featured community-wide screening and in-depth clinical interviews of screened-in youth on the Isle of Wight and in an inner borough of London. As is typical in the literature, those populations vary on so many dimensions (e.g., ethnicity, social class) other than size of community that the research gives little clue to rural-urban differences per se in prevalence rates.

Regardless, though, of the overall prevalence rates, studies of both clinical and general populations show that conduct disorders predominate among seriously emotionally disturbed adolescents in rural as well as urban communities (Costello, Edelbrock, & Costello, 1985; Kazdin, 1987; Rutter, 1980; Thompson, Rogenstein, Milazzo-Sayre, and MacAskill, 1986; for a comprehensive review, see Melton & Hargrove, in press, chap. 2). Such youth typically have multisystem involvement, with a myriad of educational, family, and community problems.

The results of studies of the prevalence of juvenile delinquency generally parallel the findings of psychiatric epidemiological studies. Data from the National Crime Survey, a representative survey of victimization, show that the general demographic patterns (race, age, sex) of offenders are similar across urban and rural areas, but that the rate of victimization is substantially less common in the latter (Laub, 1983; see also Melton, 1983b, and Roche, 1985). In both urban and rural communities, the rate of offending is most common among 18- to 20-year-olds--twice as high in the nonmetropolitan population as among 12- to 17-year-olds. In turn, the crime rate among the latter group is twice as high as among adults over the age of 21. A similar but not quite as pronounced age trend can be observed in SMSAs.

Laub (1983) concluded that rural crime and delinquency does not differ in its origin or quality from offending in urban communities:

> [T]he patterns of offending in urban areas are so similar (in terms of offending by particular age, race, and sex subgroups) to the patterns of offending in rural areas that different theories are not needed. In other words, the correlates of offending are essentially the same in urban and rural centers....Theories that specify how certain societal conditions affect particular subgroups in the population, for example, differential opportunity, attachments to society, and subcultural developments [referring to a delinquent subculture in which peers reinforce delinquent behavior], can be applied to explain

> both the urban and rural crime phenomenon because...the same subgroups are affected in urban and rural areas in terms of their crime rates. (pp. 137-138)

Although rural-urban differences (other than in the rate of offending per se) are not in the forefront of the overall picture of American crime and delinquency, some differences do occur (Laub, 1983). Urban crime is more likely to involve strangers and group offending; by contrast, intrafamilial crime is disproportionately common in rural communities.

Of course, emotional disturbance can be expressed through attacks on oneself as well as others. In that regard, identified cases of adolescent depression typically involve disturbances of conduct as well, so that some overt behavior disorders probably represent depressive equivalents (Chiles, Miller, & Cox, 1980). On the other hand, "pure" affective disturbances in adolescence often are not detected, even though general-population studies show that the rate of clinically significant depression rises sharply in adolescence, relative to younger age groups (Rutter, 1986). Such subjective distress is usually not the reason for referral of an adolescent to a mental health professional.

As already noted, depression has been common in families adversely affected by the farm crisis. Both community surveys and clinical caseloads have reflected substantial increases in depression among adolescents (and other family members) in farm communities in the Plains states.

The most extensive data on the frequency of adolescent depression in the Farm Belt at the peak of the farm crisis were gathered in a survey of 4,300 15- to 19-year-olds in three communities in rural Minnesota (Garfinkel, Hoberman, Parsons et al., 1986). Three per cent reported having attempted suicide in the past month--a rate 15 times the national average. Almost 90% of the attempters were assessed as clinically depressed on the Beck Depression Inventory (BDI). One-third of the total sample reported having been depressed in the past month. Eighteen per cent scored in the moderately to severely depressed range on the BDI--more frequent than is observed even in some inpatient samples.

Beyond the influence of contemporary socioeconomic factors, the determinants of depression are similar in rural and urban communities. In one survey (Rubenstein, Heeren, Housman et al., 1989), 20% of students in a high school in a small northeastern community[13] marked one of the following two statements as true:

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[13] Rubenstein et al. did not elaborate on the characteristics of the town, so it is unknown whether it was small enough to be "rural," although it presumably at least fell into the category of "nonmetropolitan."

"I have tried to hurt myself"; "I have tried to kill myself." Although the question about having "tried to hurt myself" is broader than in many studies, the cumulated evidence suggested that it did tap suicidality, defined by Rubenstein et al. as "self-destructive behavior engaged in with the stated intent of hurting or killing oneself" (p. 61). As would be expected, such reports were correlated with scores on depression and hopelessness inventories, r = .47. More compellingly, students who reported suicidal behavior did not differ from a comparison sample of suicidal adolescent inpatients on any of a variety of measures of psychological and social functioning.

Stressors related to suicide risk in the high school sample included, in order of strength, conflicts around sexuality, achievement pressure, family suicide, personal loss, and family illness. Protective factors included family cohesiveness, family adaptability, and some positive aspects of peer relations (e.g., social comfort and satisfaction; parental support for friends).

When none of the four most powerful stressors were present, the probability of suicidal behavior was only .03, but when all four were present, the probability rose to .92.[14] Even when stress was high, though (90th percentile or higher), a high level of family cohesiveness served as an effective buffer. The High Stress/Low Family Cohesion combination was associated with a suicidality risk of .57, but High Stress/High Family Cohesion youth reported suicide attempts only 19% of the time.

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[14] In other words, nearly all of the participants who reported the presence of the four most potent stressors also reported a history of suicidal behavior.

Substance Abuse

Just as depression in adolescence is often accompanied by misconduct, a broad constellation of impulsive and deviant behavior often goes together. Robust relationships across time and situations can be observed in the risk factors for, and the frequency of, substance abuse (smoking, drinking, use of illicit drugs), deviant behavior (e.g., stealing, lying), and (negatively) conventionality (e.g., church attendance, school performance). As a leading scholar on substance abuse by adolescents has summarized, "this set of health-compromising behaviors may usefully be seen as a syndrome rather than as separate or idiosyncratic activities" (Jessor, 1982, p. 453), although the popularity of abuse of particular substances may vary across time and place.

Research has identified no clear urban-rural differences in substance abuse by adolescents. In a study of marijuana and alcohol use in several communities in the Midwest (Krohn, Lanza-Kaduce, & Akers, 1984), prevalence in rural/nonfarm and urban communities was similar, as was prevalence in farm and suburban communities. Alcohol use was most common in rural/nonfarm communities, while marijuana use was especially common in rural/nonfarm and urban communities.

For all communities, social-learning variables (e.g., peer associations) were strongly related to substance abuse (see also Gibbons, Wylie, Echterling, & French, 1986a, 1986b; Jurich & Andrews, 1984), although the particular patterns were somewhat idiosyncratic. Social-bonding variables (e.g., attachment to parents and peers; commitment, measured by involvement in conventional school, church, and community groups, cumulative grade-point average, and educational aspirations) accounted for the most variance in alcohol use in the farm community and least in the rural/nonfarm community. For marijuana use, bonding variables were less powerful in the farm community than in the nonfarm and suburban communities.

Asked whether they had ever tried 11 substances, eighth graders in small rural communities and a midsize city (65,000) in the Rocky Mountains differed by community size only in use of inhalants (Swaim, Beauvais, Edwards et al., 1986). The observed greater frequency of use of inhalants in rural communities was accounted for by a single community. No relationship at all between community size and substance abuse was observed for 12th graders. Although a systematic relationship between community size and adolescent substance abuse could not be found, substantial variation in patterns of drug use was observed across small communities, in regard to both the kind and the amount of illicit substances used.

Given such variation, substance abuse may be especially great in some rural regions. For example, alcohol consumption has been identified as especially common among high school students in middle Tennessee (Mookherjee, 1984). Similarly, in a rural northern Michigan county with 16% unemployment, self-reported marijuana use in early adolescence was found to be significantly more common than national norms (Sarvela, Takeshita, & McClendon, 1986). Almost one-fourth of the sample reported occasional use. Self-reported regular use (more than once a week) was relatively common among 8th graders (8.2%) but nonexistent among 6th and 7th graders. Other research in the same population showed abuse of alcohol at a much more frequent rate than in national samples of the same age group (Sarvela & McClendon, 1987b; see also Sarvela & McClendon, 1987a). Almost one-fourth of the sample reported having been sick from drinking (37.5% of 8th graders), and 35.6% had been drunk at least once (60.4% of 8th graders).

In the Michigan study, peer use was highly correlated with personal substance abuse (Sarvela & McClendon, 1983). A similar constellation of variables was found to be associated with drug use by high school students in rural south Georgia: access to drugs, identification with drug-oriented group, use of drugs because friends do, perceived academic ability (negatively related), and church attendance (negatively related), with the first two variables being by far the most powerful (Goe, Napier, & Bachtel, 1985; Napier, Bachtel, & Carter, 1983; Napier, Goe, & Bachtel, 1984). Peer associations and identifications were stronger correlates of substance abuse than were family and demographic variables. In corollary discriminant analyses to separate users and abstainers, most students who were misclassified on the basis of their statistical profiles were experimenters who rarely used illicit substances.

Not only, though, did Goe et al. identify a "syndrome" similar to that observed among urban substance abusers; the prevalence among rural junior and senior high school students was also found to be substantial. At least experimental use with alcohol was reported by 76.7% of the sample, marijuana by 41.0%, cigarettes by 64.5%, amphetamines by 16.0%, and barbiturates by 12.0%.

There is some evidence that the popularity of particular substances in rural communities follows trends in urban areas. For example, a cohort study in a rural middle school in the Rockies showed "catching up" to urban areas on marijuana use in the late 1970s (Winfree & Griffiths, 1983). Consistent with other studies, social-learning variables accounted for much of the variance in individual use. In subsequent research in the same school, a shift was observed in the early 1980s toward more conservative attitudes toward drugs and less marijuana use (Winfree, 1985; Winfree & Griffiths, 1985). Without peer approval of marijuana use in the later cohorts, attitudes were found to be more strongly related to use. In other words, individual differences in adherence to a substance abuse "syndrome" become more powerful when the youth culture does not condone particular forms of abuse. Such personal attitudes appear to be well established by the time that an adolescent enters middle school, although Winfree and Griffith's data do not permit a clear conclusion about the tractability of such attitudes.

Besides reflecting national trends in youth norms about substance abuse, use in some rural communities may be affected by identification of a particular substance as especially congruent with rural culture. The current fad in use of smokeless tobacco is illustrative. Rural-urban differences in smoking are negligible. Smokers are found among 11% to 13% of 12- to 17-year-olds, regardless of race or community size (Evans & Raines, 1982).[15] By contrast, chewing is related to a perception of being "country" and identified with country-and-western musicians (Chassin, Presson, Sherman, McLaughlin, & Gioia, 1985). A study in a Pennsylvania school district showed that the majority of male senior high school students did not believe smokeless tobacco to be harmful; half had experimented with smokeless tobacco while they were in elementary school (Cohen, Sattler, Felix, et al., 1987). Among 7th graders in two rural North Carolina counties, 11.4% (almost all boys; about 20% of White males) were users of smokeless tobacco (Dignan, Block, Steckler, et al., 1986). Regular users had a more external locus of control than occasional users and thus may have been more vulnerable to peer pressure.

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[15] A slightly lower rate (9%) is found in small towns (population 2,500-24,999).

In some contrast to the findings of the other studies reviewed in this section, a large-scale survey of Minnesota junior and senior high school students (University of Minnesota Adolescent Health Program, 1986-87, 1989) showed relatively frequent use of alcohol but relatively infrequent use of other drugs and cigarettes and similar use of smokeless tobacco among nonmetropolitan youth, relative to their counterparts in the Twin Cities and Duluth. About one-fourth of metropolitan youth (21.7% of boys and 26.3% of girls), compared with 12.0% of boys and 14.5% of girls in Greater (nonmetropolitan) Minnesota, reported that drugs are used "quite a bit" or "very much" in their schools. Frequent use of alcohol in the students' schools was reported more commonly, though, in nonmetropolitan communities (Metro boys, 45.3%; Metro girls, 48.5%; Greater Minnesota boys, 55.7%; Greater Minnesota girls, 62.6%), although the students' descriptions of their own drinking habits varied little between metropolitan and Greater Minnesota samples, except that drinking and driving was more common in the latter.

About 7% of both metropolitan and Greater Minnesota boys reported daily use of chewing tobacco, but daily smoking of cigarettes was more common in the metropolitan group (Metro boys, 13.1%; Metro girls, 15.6%; Greater Minnesota boys, 8.7%; Greater

Minnesota girls, 10.0%). Illicit drugs were used relatively rarely throughout the state, but clearly more in the metropolitan areas.[16]

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[16] Self-report of marijuana use was as follows: Metro boys, 11.0%; Metro girls, 9.2%; Greater Minnesota boys, 4.7%; Greater Minnesota girls, 3.9%. Use of amphetamines was reported by 2.0% of Metro boys, 3.8% of Metro girls, 1.9% of Greater Minnesota boys, and 2.1% of Greater Minnesota girls. Use of cocaine was reported by 1.1% of Metro boys, 1.8% of Metro girls, .6% of Greater Minnesota boys, and .2% of Greater Minnesota girls.

When the peer norm is use of a particular substance (as may be the case, for example, in regard to smokeless tobacco among boys in many rural communities), abstinence is difficult to achieve and probably contingent on core personal values. For example, in a study of high school students in rural eastern

North Carolina, the only reasons cited by youth with all levels of drinking history (abstention, light-to-moderate, or heavy) as sufficient to refrain from drinking were those that dealt with self-respect/personal integrity or family values (Reeves & Draper, 1984).

In that regard, substance abuse in particular rural populations may occur when fundamental cultural values are vulnerable as a result of substantial threats to community life. Substance abuse among American Indian youth may represent such a phenomenon (see Yates, 1987). Epidemiological studies show high rates of beer drinking among Indian youth, even in the intermediate (4th to 6th) grades, with alienation apparently a major risk factor (Weibel-Orlando, 1984). Records of a state substance abuse program in North Dakota showed much more positive outcome data for White than Indian youth (Query, 1985).

Contraception and Pregnancy

Although conservative attitudes in regard to expression of sexuality often are associated with ruralness, neither sexual behavior nor questions and conflicts about sexuality among adolescents are strongly linked to community size. In one conservative rural county in New York, a survey of high school students showed that their sexual activity was unrelated to religiousness and only weakly related to sex-role attitudes (McCormick, Izo, & Folcik, 1985). Forty per cent of the students were nonvirgins, a proportion comparable to other studies (cf. Hayes, 1987). The students demonstrated strong interest in more extensive sex education, but such attitudes were unrelated to use of effective contraception (McCormick, Folcik, & Izo, 1985).

In another study of a rural community in the East (McCool, Vicary, and Susman, 1989), boys in grades 7 to 9 answered questions about their sexual activity, substance use, participation in deviant behavior, self-image, family relations, church attendance, peer relations, and school performance. Nearly half of the sample reported having engaged in sexual intercourse. The majority of the variance in sexual activity was accounted for by substance abuse. When substance abuse was removed from the multiple regression analysis, variables related to deviant behavior and (negatively) conventionality (e.g., church attendance) accounted for nearly half the variance in sexual activity. The general picture was that some sexual activity was quite common even in early adolescence, but that high frequency of such activity was part of a broader syndrome of deviant, impulsive behavior.

The Minnesota youth survey (University of Minnesota Adolescent Health Program, 1986-87, 1987) showed first intercourse occurring at a later age among boys in Greater Minnesota (mean = 14.3) than boys in the Twin Cities and Duluth (mean = 13.4), but there was no rural-urban difference for girls (mean = 14.6). The proportion of the nonvirgins reporting infrequent sexual activity was about three-fourths for boys and girls in both metropolitan and nonmetropolitan communities, but pregnancy rates were nearly twice as high among metropolitan girls.

Although rural residence has little to do with sexual behavior among adolescents, the combination of social conservatism and geographic isolation do narrow the range of reproductive choices available to rural adolescents. Fourteen per cent of nonmetropolitan youth live in a county with no family planning clinic (Hayes, 1987). Fertility rates for adolescents are highest in the South (Morgan, 1983), where abortion is least likely to be available for poor women (Henshaw & Wallisch, 1984). In 1982, 78% of all United States counties had no abortion provider, and only 2% of abortions were performed in nonmetropolitan counties (Henshaw, Forrest, & Blaine, 1984). As states begin to tighten their regulation of abortion in response to changes in the Supreme Court's view of the constitutional limits of the right to privacy, it is possible that abortion will become even less accessible to rural women.

Access to abortion is difficult for rural adolescents because of both the lack of providers and, in states requiring that adolescents not seeking parental consent for an abortion instead obtain judicial approval, the number of judges who have recused themselves from adolescent abortion cases (i.e., who have declined to hear such cases because of their personal scruples about abortion). Often pregnant rural adolescents must arrange to travel substantial distances to obtain an abortion and, when a judicial proceeding is required, sometimes to make multiple trips to a metropolitan area or out of state before an abortion can be performed. The results are increases in the number of unwanted children and in health risks because of delay for those adolescents who do ultimately obtain an abortion (Blum, Resnick, & Stark, 1987; Melton, 1987c).[17]

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[17] In its October 1989 term, the Supreme Court will review a case, *Hodgson v. Minnesota*, in which the trial record contains a particularly well developed array of evidence about the delay and stress engendered by judicial alternatives to parental consent and the lack of efficacy of such procedures in diminishing stress related to the abortion decision itself and improving the quality of adolescents' decision making (see generally Melton, 1987c; Melton & Pliner, 1986).

Teen pregnancy and parenthood are undeniably stressful in most cases (Adler & Dolcini, 1986; Marecek, 1986). However,

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rural youth are not unusually vulnerable in that regard. The strain reported by pregnant and parenting adolescents is moderate for rural girls, with greater stress experienced by suburban adolescents but less by urban youth (Barth & Schinke, 1983).

Maltreatment

Studies of rural-urban differences in child maltreatment rates are virtually nonexistent (Rosenberg & Reppucci, 1983),[18] and the few studies available generally do not report data disaggregated by age in such a way that rural-urban differences in adolescent maltreatment might be discerned. In the only study of which we are aware that directly assessed rural-urban differences, no differences were found in the degree of relationship between adolescent abuse and adolescents' perceptions of family relationships and conflict (Martin, Schumm, Bugaighis et al., 1987).

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[18] The review by Rosenberg and Reppucci focuses primarily on physical maltreatment. We also have been unable to find any research on rural-urban differences in sexual abuse.

Rosenberg and Reppucci (1983) suggested that physical isolation may be a risk factor for maltreatment, given the known relationship between social isolation and maltreatment. However, it is not intuitively clear that physical isolation in fact makes social isolation easier, because close relationships with neighbors (even if physically distant) are easier to maintain in rural communities (Melton, 1983b).

Systematic study of relationships among physical, social, and psychological isolation might be productive in identifying those rural families most at risk and the protective factors that prevent maltreatment and other adverse outcomes. Such research should be longitudinal in order to capture the process of isolation--when isolated families have withdrawn, and when they have been pushed away by the community.

SPECIAL ISSUES IN RURAL ADOLESCENTS' ACCESS TO HEALTH CARE[19]

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[19] Readers may note seemingly disproportionate attention to mental health issues in this section. In part, this emphasis reflects the fact that health problems of adolescents (e.g., trauma, contraception, substance abuse) commonly are behavioral in origin. Therefore, adolescent health care, especially prevention, necessarily must give great weight to behavioral medicine and mental health. Regardless, the discussion in this paper reflects the distribution of the literature, which was reviewed through computerized searches of all major medical, psychological, educational, and sociological databases.

With some exceptions (e.g., the high incidence of serious injuries among rural youth; the apparently increased prevalence of depression in recent years among youth in the Farm Belt), the data available on rural-urban differences in health problems among adolescents are more notable for what they do not show than for what they do. Rural communities are neither havens from health problems nor unusually pernicious settings. However, the near-absence of striking epidemiological findings does not imply the absence of special issues in rural health planning. Such problems are substantial.

Human Resource Issues

The Shortage of Health Professionals

Perhaps the most glaring problem in rural health planning is simply the serious difficulty in finding qualified providers. The geographic distribution of health professionals is inefficient, with many rural areas either underserved or unserved (Copans & Racusin, 1983). Rural areas have a shortage of both physical and mental health professionals (Flax, Wagenfeld, Ivens et al., 1979), a shortage that is probably especially serious in regard to services to adolescents, because of the subspecialty status of both adolescent medicine and adolescent mental health. Perhaps reflecting the dearth of health care providers in many rural areas, rural youth are especially likely to receive their health care from hospital clinics and relatively unlikely to have any consistent source of care (University of Minnesota Adolescent Health Program, 1986-87, 1989).[20]

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[20] Such a finding probably also reflects the relatively low proportion of rural adolescents covered by private health insurance or Medicaid.

Only 20% of physicians, few of them specialists, are located in rural areas (Norton & McManus, 1989). The problem is not cured by an increase in admissions to medical schools.

Increasing the number of doctors without establishing institutional constraints on their practice (e.g., through payback requirements) results in an increase in the number of specialists in urban areas and a decrease in the diffusion of general practitioners to rural areas (DeFriese & Ricketts, 1989; Dennis, 1988).

Analogously, in 1978 the President's Commission on Mental Health emphasized the shortage of mental health services in rural areas. Mental health professionals are concentrated in urban centers (Richards & Gottfredson, 1978). The special significance of this phenomenon for services to youth is illustrated by the fact that one-third of American child psychiatrists live in or near seven major metropolitan areas, accounting for only 10% of the population and less than 1% of the geographic area (Copans & Racusin, 1983). Doctoral-level professionals, especially those who specialize in work with children and youth, rarely seek employment in rural areas (Jerrell & DiPasquale, 1984).

Because of the demand for a broad range of services from a limited number of service providers, rural health service providers tend to be "generalists" by necessity. They must possess a wide range of skills and knowledge, and be flexible and adaptive (Hargrove, 1982). Only one-fifth of physicians overall but 35% of general practitioners are located in rural areas (Norton & McManus, 1989).

In rural areas, professionals often experience "role confusion," or the blurring of boundaries between various professions (Bachrach, 1985; Hargrove, 1982b). There is a risk of having to settle for a mediocre performance of a wide variety of functions in the absence of specialists who might offer a higher quality of performance of a narrower range of functions (Hargrove, 1982b). Thus there may be a tradeoff between accessibility to services and quality of care (Bloom, 1975). If any specialized services are to be available, then rural consumers must be willing to accept their provision by providers without specialized training.

Obstacles to Recruitment and Retention of Professionals

Diseconomies of small scale limit the range of services which can be offered in rural settings (Bachrach, 1982; Hargrove, 1982b) and concomitantly limit the number and type of professionals that rural clinics can afford to recruit (Bachrach, 1985). The economic crisis that has been experienced by many rural areas has exacerbated the problem by diminishing the local tax base.

The problem is not simply one of finances, though. Practice in a rural environment is not without its advantages: variety in the scope of clientele served, relatively less bureaucracy in the work setting, and increased decisionmaking responsibilities (Jeffrey & Reeve, 1978). However, even these advantages may be negatively valued by some. For example, the breadth of responsibility may be viewed as burdensome (Jerrell & Herring, 1983), and professionals may wish to specialize in those activities and client populations that most interest them.

Other problems associated with rural practice include limited opportunities for staff development and continuing education (Bachrach, 1982), visibility of service providers (Hargrove, 1982a; Kinney, 1985), visibility of agency clientele (Kinney, 1985), absence of appropriate referral sources (Hargrove, 1982a; Kinney, 1985), and potential value differences between service providers and rural residents (Flax, Wagenfeld, Ivens et al., 1979; Hargrove, 1982a; Miller, 1981). The dimensions of quality of life on which rural communities do most poorly may also be those that are most salient to highly educated professionals: residents' average educational level and, therefore, the availability of social interaction with people of similar background; the economic standard of living; cultural amenities, and so forth.

Visibility of service providers is often a problem in rural areas and threatens confidentiality and anonymity (Jeffrey & Reeve, 1978; Keller & Murray, 1982). High visibility is especially a problem for mental health service providers, for whom contact outside the therapeutic relationship creates conflicting role demands (Hargrove, 1982a). Rural health professionals face a paradoxical situation of needing to avoid dual relationships with clientele for ethical reasons, while at the same time recognizing the importance of community involvement and acceptance (Solomon, Heisberger, & Winer, 1981). The social distance between health professionals and rural residents tends to increase as professionalization and specialization occur. Rural health professionals tend to be psychologically isolated from other rural residents and physically isolated from professional colleagues (Bachrach, 1985; Flax, Wagenfeld, Ivens et al., 1979; Rogers, 1988; Solomon, Heisberger, & Winer, 1981).

The personal discomfort that is engendered may be a particularly powerful obstacle to retention of those health professionals who are attracted to rural communities. Of course, client visibility can also be a matter of concern to clients themselves. In view of their special sensitivity to the privacy of personal information (Melton, 1983b), adolescents may be especially troubled by the difficulty in preserving confidentiality when they are being treated in a small community.

Training Issues

A two-part strategy for training follows from the needs both to attract health professionals to rural communities and to equip them with the skills necessary to adapt to the special demands of rural practice. First, more clinical training programs should be established in rural areas. Surveys of rural mental health professionals have shown that professionals who choose to work in rural areas tend to be people who received their graduate training in a rural locale (Dengerink, Marks, Hammarlund et al., 1981).

However, formal training for both health and mental health service providers usually takes place in urban settings quite discrepant from rural areas (Dengerink, Marks, Hammarlund et al., 1981; Hargrove, 1982a; Hollingsworth & Hendrix, 1977). Rural professionals are typically employed by public agencies, and they provide services to a broad range of clientele who may be different from the populations served by urban teaching hospitals and clinics. Even when urban teaching facilities serve many poor people, the demographics of poverty in urban and rural areas may be sufficiently different that the urban experience is not generalizable to work in rural public programs. Means of dealing with the practical problems associated with being a highly visible generalist can be best taught in rural practica and internships.

Second, didactic material on the ecology of rural communities and the special problems of rural health planning should be incorporated into academic training programs. Illustrative of the lack of attention to such matters is the finding that only 1.5% of Master of Social Work programs include instruction on rural child and family services (Friesen, 1989). Besides leading to services that are better suited to rural settings, such a focus in graduate and professional education might stimulate more research useful in understanding the links between rural family and community life and adolescent health.

In addition to alteration of curricula to provide greater interest and sophistication in *rural* services, greater emphasis should be placed on *adolescent* services. In that regard, insofar as the needs of youth are involved, the generalist approach in rural services might be better refocused from generic health (or mental health or welfare) services to generic adolescent services.

Adolescent health problems are often behavioral in nature, and interventions designed to remediate adolescent behavior disorders are most effective when they involve an integrated approach that incorporates elements from traditional health, mental health, social service, and educational interventions (for a comprehensive review of related outcome research, see Melton & Hargrove, in press, chap. 3). Professional training programs in mental health typically lead toward adult, office-based, time-limited, fee-for-service models that do not correspond well to the intensive family and community-based services that are most effective in treating adolescent disorders (see Tuma, 1985). Among such models are intensive home-based services, therapeutic day schools, clinical advocacy, and other program types that incorporate individual skill building with family and community interventions and that provide for therapist contact for extended periods of time in "real-life" situations (see, e.g., AuClaire & Schwartz, in press; Barton & Butts, in press; Baenan, Stephens, & Glenwick, 1986; Flomenhaft, 1974; Henggeler, Rodick, Borduin, Hanson, Watson, & Urey, 1986; Hinckley & Ellis, 1985; Hobbs, 1982; Melton, 1983a; Pecora, Delewski, Booth, Haapala, & Kinney, 1985; Shore & Massimo, 1979; Winsberg, Bialer, Kupietz, Botti, & Balka, 1980).

By the same token, conventional training programs based on professional disciplines contribute to the overdifferentiation and poor coordination of services across the various youth systems (see Knitzer, 1982). The juvenile justice, mental health, special education (behavior disorders), and child welfare systems serve essentially the same population with essentially the same purpose, but largely without intersystem planning (Melton, 1987b; Melton & Spaulding, in press). Development of an integrated service system nearly from the ground up--the task in most rural communities--provides the opportunity to plan programs that are need-based and build on community strengths. Narrow divisions of responsibility among psychologists, social workers, educators, public health workers, and so forth interfere with the fulfillment of such an opportunity.

Although it may be unrealistic to develop a adolescent specialty practice within a rural medical or mental health clinic or even a rural social service office, both economic efficiency and services research support development of a generic adolescent service that combines some of the resources of the various service systems charged with treatment of behavior disordered youth--health, mental health, special education, child welfare, and juvenile justice. Therefore, interdisciplinary training may be optimal for specialists in services to rural adolescents.[21]

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[21] An exemplar of such an approach is the teacher-counselor training developed and evaluated by Hobbs (1982) in Project Re-ED. Combining the resources of the Departments of Educational Psychology, Human Development and the Family, Psychology, and Special Education and the School of Social Work at the University of Nebraska, we currently are developing an analogous program for child and family service specialists. Such an interdisciplinary approach is consonant with inferences that can be drawn from epidemiological research about the needs of youth at risk and from outcome research about the interventions that are most effective in responding to those needs (Melton & Hargrove, in press). As noted in the accompanying text, such an approach also matches the realities of generalist practice in rural communities.

An important qualifier to this conclusion is that few studies evaluating integrated adolescent service models have taken place in rural communities. However, conceptually, such approaches would be expected to be especially well suited to rural communities. The shortage of professionals makes highly specialized, discipline-based services unrealistic even if they were wise, which urban outcome research suggests is not the case. Moreover, the high level of interconnectedness among residents of rural communities facilitates the use of community neighborliness and sense of collective responsibility to promote the well-being of youth. Similarly, small scale may increase the ease of assessment of "mismatches" between the needs of youth (whether individually or as a group) and the responses of the community. It also may provide a workable context for intervention to remediate such mismatches.

Availability of Nonprofessional Resources

As this analysis implies, one response to the shortage of professionals in rural areas is to increase reliance on nonprofessional service providers (Hollingsworth & Hendrix, 1977; Jeffrey & Reeve, 1978).[22] Nonprofessional staff positions are relatively inexpensive, and use of nonprofessionals in direct services frees professionals for specialized functions like supervision, program development, training, diagnosis, and evaluation research (Christensen, Miller, & Munoz, 1978). Nonprofessionals also can also be a bridge across cultural gaps that sometimes are present between professional service providers and rural residents (Bergstrom, 1982).

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[22] The same analysis also suggests increased reliance on broadly trained subdoctoral-level professionals who are indigenous to rural communities. As a profession that builds on both medicine and behavioral science, nursing may have a particularly important role to play in rural adolescent health services.

Development of nonprofessional human resources is not a panacea. Some possible disadvantages of employing nonprofessionals include lack of career identification, limits in vertical and horizontal job mobility, narrow training, limits to the generalization of job skills from one setting to another, and a high rate of turnover (Dugger, 1975). Moreover, when appropriately trained, nonprofessionals may be able to provide many psychological and social services, but there are obvious limits to the range of health services that they may be able to provide. In particular, highly technical medical skills are outside the appropriate scope of nonprofessional services; obviously, one cannot look to community volunteers to provide surgical services.

Even in psychosocial programs, nonprofessionals are sometimes shortsighted, and they often require ongoing inservice training. Initial training, intensive though it may be, is inadequate by itself for a long-term service delivery position (Pattison, Kuncel, Murillow et al., 1979). Specific inservice training does make a significant difference in the skill development of nonprofessionals; however, followup studies indicate that some skills are not maintained without provisions for monitoring of services and continuing education (D'Augelli &

Levy, 1978). Although nonprofessionals can be taught many skills to fill in gaps in needed services, their employment should not be seen as a quick and simple solution to health worker shortages in rural areas, even in regard to psychosocial services (D'Augelli, 1982). The conceptual foundation for services still is a critical ingredient of program development (see Heyman, 1983), and training still must be a central feature of program implementation.

On the other hand, the availability of medical and mental health professionals cannot be assured to improve the well-being of youth (see, e.g., Glasser, Amdur, & Backstrand, 1985). In general, when given adequate supervision and training, nonprofessionals are able to provide psychosocial services at least as effective as professionals, and research indicates they may be even more effective than professionals in treating behavioral problems of adolescence (Berman & Norton, 1985; Durlak, 1979, 1981; Hattie, Sharpley, & Rogers, 1984; Nietzel & Fisher, 1981).

Whether volunteers or paid paraprofessionals are used, reliance on nonprofessionals is an obvious response to the practical needs for human resources in rural services. Use of indigenous workers also fits conceptually with the rural ecology by building on "natural" neighborliness and adolescents' needs by giving time to enhancement of skills in adapting to everyday environments. Nonetheless, it is important to recognize that most of the evaluation studies on nonprofessional youth services have been conducted in urban areas.

The potential for reliance on informal and nonprofessional service systems and development of new nondisciplinary or interdisciplinary professionals for work with rural youth raises questions about the utility of restrictive regulation of professional practice, whether such regulation is administered by licensing boards, third-party payors, or accrediting bodies. As already noted, a requirement of high-level, specialized professional training as a prerequisite for practice may effectively deny most health services to rural youth.

Even if the tradeoff between specialization and availability were not present, though, there still would be questions about whether restrictive regulation of practice is consistent with the interests of rural adolescents. Outcome research provides no basis for limitation of authority for adolescent mental health services to professionals with particular disciplinary backgrounds. More generally, the reality of rural services, especially to youth, is a need for flexibility to deal with the broad needs of the community and innovation to promote the application of the community's natural concern for its members and to apply scarce resources efficiently.

Although debates about restrictions on professional practice typically turn on assumptions about the economic impact of constraints on competition (see, e.g., Hogan, 1983), the more fundamental problem for services to rural adolescents probably is the stifling of innovation (see Danish & Smyer, 1981). The challenge is to develop fiscal incentives and regulatory mechanisms that encourage the establishment of relatively unrestrictive services that incorporate the nonprofessional resources of the community and that facilitate social support for troubled youth and their families.

Special Financial Issues

The already formidable problems of designing rural service systems have been exacerbated by the economic crisis that many rural areas have experienced in the last decade. The demand and need for services have increased at the same time that local and state tax bases in rural states have been fragile or diminished (see, e.g., Joint Rural Task Force, 1988).

The personal resources of rural residents seeking health care also have diminished. In 1984, for example, 16.6% of all metropolitan youth were without public or private insurance, compared to 12.6% in urban areas (McManus, 1989); the gap widened in subsequent years as the farm crisis deepened (Joint Rural Task Force, 1988). Managed health services, such as health maintenance organizations, are also generally unavailable for rural residents (Norton & McManus, 1989). Absence of private insurance is partially the result of the relative lack of corporate job opportunities (McManus & Newacheck, 1989; U.S. Congress, 1988). Agriculture and mining are among the occupations with the lowest rates of family health insurance (Kronick, 1989).

Rural states also typically provide more restrictive access to Medicaid and less extensive coverage than urban states (Kronick, 1989; McManus & Newacheck, 1989). Only half of the ten most rural states but all of the ten most urban states provide Medicaid benefits to all impoverished children and youth under age 18. Not only are youth in rural states particularly likely to be in a poor, two-parent, working family (Cordes, 1989), but families fitting such descriptions in rural states are especially likely to be ineligible for public insurance.

The significance of this fact was demonstrated in a study conducted in Arizona at a time when that state did not participate in the Medicaid program (Blendon, Aiken, Freeman et al., 1986). The effects on access to medical care were most pronounced on children and youth and on rural residents. In 1982, children in impoverished households in Arizona saw physicians 40% less often than children in comparable states with Medicaid coverage. Rural Arizonans had 22% fewer physician contacts than did rural patients in other states. Although data were not presented in a manner that the interaction between variables could be determined, it is likely that rural children and youth were the most adversely affected of all. Such a hypothesis is supported by the national data showing poor rural youth to be particularly unlikely to report having seen a physician within the past year (McManus, 1989; McManus & Newacheck, 1989).

In general, rural areas not only receive little federal support especially targeted to their health and social needs, but they also receive a disproportionately small share of general federal aid. Although poverty in rural areas is disproportionately common, federal aid, including Medicaid, is disproportionately low, in part because of rural states' relatively infrequent adoption of optional programs (Copans & Racusin, 1983; Cordes, 1989; McManus, 1989). The criteria for individual federal assistance have a disparate negative impact on rural people, through establishment of single-parenthood or unemployment as a criterion for any assistance[23] and establishment of gross rather than net income as the standard for poverty. A more direct urban bias in federal policy is that qualification as an SMSA is worth $1? to $14 million per year ($1 million in differential Medicare reimbursements alone); no parallel special assistance goes to nonmetropolitan areas (Cordes, 1989).

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[23] The Family Support Act of 1988 attenuated but did not eliminate this problem. Although two-parent households eligible for unemployment benefits are now also eligible for AFDC, neither "working poor" families nor two-parent families ineligible for unemployment benefits are covered.

Other structures for federal support have subtle negative effects on rural communities. For example, as already noted, Medicaid's unit-based fee-for-service model of reimbursement for services provided by particular types of professionals is ill-suited to adolescent mental health services generally, but it is especially ill-fitting when applied to rural youth.

More subtly, federal policy since the adoption of the Omnibus Budget Reconcilitation Act of 1981 to provide block grants to the states rather than categorical support probably has resulted unintentionally in a deemphasis of special rural initiatives (Bachrach, 1985; Jones & Parlour, 1985; Hargrove & Melton, 1987). A survey of state mental health commissioners by

Ahr and Holcomb (1985) was especially telling. When commissioners were asked to rank 62 priorities, rural community mental health ranked 61st. The low priority for rural services was especially striking given that a high priority for rural mental health services had just been enacted into federal law (Mental Health Systems Act) prior to the adoption of the Alcohol, Drug Abuse, and Mental Health Block Grant and corollary repeal of most of the Systems Act. The federal priority had been a response to the report of the President's Commission on Mental Health (1978), which had identified rural areas as largely underserved or unserved.

The precise effects of block grants have not been established (U.S. Congress, "Block," 1985). Not surprisingly, state officials usually welcome the removal of "strings" on federal funds, and interest groups perhaps just as expectedly lament the demise of federal oversight (U.S. Congress, 1984). It is plausible, though, that states will continue to use their discretion to emphasize traditional state services (e.g., psychiatric hospitals) and populations historically cared for by the states (e.g., chronically mentally disordered adults), although this tendency may be attenuated by the requirement to set aside a portion of mental health block grant funds for children's services. Disbursal of funds directly to state authorities rather than community mental health centers also may be more likely to lock service delivery into rigid civil service and union personnel rules. The sorts of flexible, community-based programming probably most suited to the needs of rural youth thus may have been unintentionally undermined by the movement away from federal categorical programs to block grants. Unfortunately, the data do not exist to refute or support this conclusion, because of the changes in reporting requirements that accompanied the onset of block grant programs.

Whatever the reality in regard to shifts of programmatic emphasis, it is indisputable that block granting was accompanied by diminished federal aid to communities (Sharfstein & Patterson, 1983). The net effect through 1988 of block grant funding for mental health services was a 50% reduction of federal support (NMHA, 1988).

The adverse effects of federal policies affecting the financing of rural health services have been multiplied by the trends in health care organization and ownership, trends that have been at least tacitly supported by federal policy. In particular, the movement toward privatization of health care is inconsistent with the realities of rural health finances. Rural hospitals have a disproportionate number of publicly insured (Medicare/Medicaid) and uninsured patients and fewer privately paying patients (in both relative and absolute terms) across whom to spread the costs of uncompensated care (Moscovice, 1989). Proprietary hospitals generally seek a service area in which charity care is minimized (Eisenberg, 1984; Schlesinger, Marmor, & Smithey, 1987; Yahr, 1988). In the current reimbursement climate, health care corporations also pursue unduly restrictive forms of care and eschew the models of service that appear especially suited to the needs of troubled rural youth, probably because they are not easily incorporated within a unit-based fee-for-service system (see Scalora & Melton, in press).

The evidence is clear that rural health care facilities have been disproportionately affected by the current trends in health care management (Moscovice, 1989). Between 1979 and 1985, the number of rural hospitals and hospital beds decreased by 7.3% and 8.2%, respectively, even though the rural population continued to grow; by contrast, urban hospitals and hospital beds increased by 3.5% and 5.1%, respectively. Admissions to rural hospitals decreased by 22.1%, but admissions to urban hospitals increased by 1.1%. Although rural hospitals often are unprofitable, their maintenance probably remains in the public interest as cost-effective services when travel costs to urban centers, possible increased risk of morbidity and mortality associated with decreased access and increased travel time to medical centers, and economic impact on the community are considered.

In short, current health care financing systems provide incentives for centralization, urbanization, and privatization--all trends that are inimical to the development of services for rural youth. Rural health services are diminishing, and their form increasingly is inconsistent with the models of service probably most conducive to shaping healthy behavior in rural adolescents.

The decline in rural health services is troublesome not only because of decreased access to services, but also because of the adverse effect on the local economy, thus multiplying the stress that contributes to health problems. Health services are an important source of economic diversification in rural areas. Rural health services provide opportunities for economic development, education, and employment (Cordes, 1989). The short-term loss to a commmunity of closure of a rural hospital has been estimated at $700,000 to $1 million in 1978 dollars (Moscovice, 1989). In that regard, increased competition with rural clinics and hospitals by urban health centers ultimately may mar the outlook even further for rural youth already convinced that few opportunities await them.

Issues of Physical Access

The financial burdens faced in development and maintenance of rural health services sometimes are matched by the practical problems of physical accessibility. In rural settings, the "time price" of obtaining health services may be as much of a problem as the "money price" (White, 1986). Access to health services may be impeded by actual physical distance, as well as weather conditions, absence of roads, or having no access to a vehicle (Rosenberg & Reppucci, 1983).

The significance of the transportation problem for rural poor families was starkly summarized by Cordes (1985):

> Despite the high rate of automobile ownership, the nonmetropolitan population contains a disproportionate share of the transportation disadvantaged. At least two reasons contribute to this situation. First, those rural people without automobiles (typically the poor and/or the elderly) do not have the same alternatives available to them as do their urban counterparts. For example, less than 10% of communities under 2500 population are served by taxi service; and in terms of inter-community transportation

> alternatives, passenger rail service is available in very few rural communities and intercity bus lines serve only 15% of towns and places under 2500 population.
>
> Even families with an automobile have difficulty if the only vehicle is used by the principal wage earner to travel to and from work. It is estimated that as many as 20 million nonmetropolitan residents fall into this category. (pp. 1375-1376, citations omitted)

Problems of physical accessibility are apt to have special significance for the design of services for rural youth. For example, travel time makes it difficult to assemble multidisciplinary treatment teams, an approach often advocated for adolescents, especially those with mental health problems (Copans & Racusin, 1983). Less subtly, when maintenance of confidentiality, whether in relation to parents or peers, is a key issue for adolescents in need of health services, lack of transportation can be a de facto bar to services. A survey of adolescents in a small town in the Midwest showed a preference for specialized clinics over private physicians' offices for particularly sensitive matters such as contraception and substance abuse (Craft, 1987). Adolescents also preferred not to be accompanied by parents when they sought health care for adolescent problems like depression and acne (cf. Melton, 1983b). If privacy is to be respected, services must be located where youth themselves spend their time (e.g., in school), or provisions must be made for transportation to clinics that are distant from adolescents' homes.

Special Sociopolitical Problems

Design of services that are consistent with rural adolescents' needs for privacy presents substantial sociopolitical problems as well as practical problems of accessibility. Although rural-urban differences in social and political values are not strong (especially when controls are added for region, education, and other variables), they are reliable (Gertz, Meider, & Pluckhan, 1975). Surveys of adult residents of rural areas show them to be somewhat more fatalistic (Hargrove, 1982a), cautious, and conservative (Bachrach, 1985; Gertz, Meider, & Pluckhan, 1975) than urbanites. For example, the political conservatism of rural adults often is demonstrated in presidential elections (Melton, 1983d). Other values said to be relatively consistently found among rural residents include familism, individualism, and traditionalism (Flax, Wagenfeld, Ivens et al., 1979).

Such values can have considerable significance for program design. For example, traditional family values and emphasis on respect for authority may inhibit acceptance of health programs that guarantee adolescents confidentiality in relation to their parents or that promote youth involvement in decision making about their health care. Similarly, clinics that offer contraceptives and reproductive information to youth may engender vehement opposition in some rural communities because of the dominant conservative views about expression of sexuality. Many rural residents may be especially suspicious about the permanence and stability of government programs (Solomon, 1986) and wary of help-giving by sources perceived as external to the community (D'Augelli, 1982). As a result, careful attention must be given to the auspices of health services. Although avoidance of mental health professionals is hardly unique to rural areas, rural residents show a particularly strong preference for help with personal and family problems from general practitioners, clergy, and natural helpers (Jones, McDanal, & Parlour, 1985).

Such attitudes and values are influential not only in developing a program that obtains community acceptance but also in recruitment and retention of professionals. Rural health service providers are usually unsuccessful in gaining community acceptance unless they are willing to learn about local power structures and rural politics and to communicate with key community officials (Gertz, Meider, & Pluckhan, 1975). Also, the greater the discrepancy in values, the greater the possibility of communication problems between health professionals and their clients, whether adults or youth (Flax, Wagenfeld, and Ivens, 1979; Hargrove, 1982a). Therefore, when local attitudes and values differ substantially from those of health service providers, the clinicians are apt to find themselves both relatively ineffective and unhappy, and transience in key professional positions can be expected.

Special Technological Issues

In a developing area like adolescent health care, keeping abreast of the literature and then being flexible enough to change one's practice as the state of the art changes are matters of considerable importance. Such issues of knowledge diffusion and utilization are especially acute in rural communities.

In general, innovations and change are relatively slow to filter through rural communities (Rogers & Burdge, 1972; Rogers & Shoemaker, 1971). Rural communities have served, in fact, as the laboratories for much of what is known about the process of diffusion and utilization of scientific knowledge. Much of the literature on diffusion of innovations has focused on rural communities and the role of agents of the Cooperative Extension Service in the diffusion of knowledge relevant to agriculture and other aspects of rural life (Havelock, 1969). Similar research on rural-urban differences in the speed of acquisition of new knowledge and adoption of relevant innovations has been conducted with diverse professional groups (e.g., lawyers and police officers; see Wasby, 1976).

The major problem in diffusion of new knowledge and practices among rural health professionals is simply the lack of a "critical mass." When no other adolescent specialist can be found for hundreds of miles, a clinician is rarely able to profit from informal modeling of new procedures and exchanges of information. Similarly, as generalists, rural clinicians often will not have sufficient numbers of patients of a particular age group and problem to learn by trial and error or warrant the investment of time in reviewing the relevant scientific literature.

Once information is diffused, however, it should not be assumed that there necessarily will be resistance to adoption of innovations, whatever cultural tradition of conservatism there is. Because of the relative lack of bureaucracy, rural agencies often are able to adapt more easily to innovative programs than urban agencies (Larsen, 1985). For example, simply because of the relative simplicity that accompanies small size, rural agencies are likely to find merging of agency staffs, as in a school health clinic administered partially by a community health center, to be easier than will urban school and health agencies.

PRINCIPLES OF PROGRAM DEVELOPMENT

With a few important exceptions (e.g., accidental injuries; depression among youth in economically distressed farm communities), health problems are neither prevalent nor rare among rural youth. Therefore, broad initiatives based on special needs of rural youth in general probably are not required, although services could be developed to respond to acute, widely prevalent needs of youth in particular regions or communities. For example, as noted in the section on rural change, boom towns can expect increased prevalence of health problems among adolescents, especially girls. Also, youth in economically distressed regions and communities may require new programs to prevent or ameliorate depression and related behavioral problems. Most generally, the high incidence of serious injuries to rural youth, especially those living or working on farms, suggests the need for major initiative to prevent such injuries and to provide more reliable emergency services for treatment of such injuries when they occur.

Although rural adolescents generally do not have uniquely or even largely "rural" problems, it also should be remembered that they have the same problems as do urban and suburban youth. Whatever the idyllic image of rural America, the reality is that substance abuse, for example, is found there just as in urban centers where greater public attention has been given to drug problems. Therefore, the fact that rural communities are almost always underserved or unserved presents a challenge to ensure that services are provided to meet typical adolescent health needs.

This paper has presented numerous factors adversely affecting the development and implementation of adolescent health services in rural communities. Two of these factors seem particularly important. First, there is a dearth of rural professionals with specialized training in adolescent health, including mental health. Second, the economic base for rural health services is quite tenuous. Although the aggregate economies of rural and urban areas are similar, particular rural communities are much more likely to have undiversified economic bases and therefore to be susceptible to rapid declines in community welfare and local tax bases, as occurred in agriculture-dependent regions in the mid-1980s, when the single industry is not flourishing. Moreover, the evidence is clear that, on average, rural communities have disproportionately high levels of poverty, low numbers of professional and managerial jobs, and low median income, even when controls are added for cost of living. A firmer fiscal foundation for rural services is needed, especially in those areas that are susceptible to rapid change in economic well-being. Consideration of these two factors (i.e., a shortage of health professionals; a fragile economic base for rural communities and the health services within them) in the light of research about the characteristics of rural communities leads to some general guidelines for health services to rural youth.

To respond to the problem of human resources, programs are needed to increase the availability of health professionals who understand rural life and adolescents and are motivated to work in rural communities. Alternatives to alleviate the human resource shortage include fiscal incentives (e.g., fellowships with payback requirements), care in selection (e.g., recruitment of graduate and professional students who grew up in rural communities, perhaps with special incentives for such students), and rural training opportunities (e.g., practica, internships, and residencies in rural communities; inclusion of material on rural psychology and sociology in basic curricula).

At the same time, some of the shortage in specialized professional services may be inherent to rural communities. Highly specialized programs often are not economically viable in small communities, even if sufficient potentially recruitable professionals were available. Therefore, emphasis should be placed on assistance to rural communities, perhaps through carefully conceptualized and evaluated demonstration projects, to organize both formal and informal nonprofessional resources most efficiently and effectively to meet the needs of youth. The need to rely on nonprofessional resources should be viewed as an opportunity to provide the sorts of broad supports that are most effective for both prevention and treatment of adolescent problems, consonant with the "neighborliness" commonly found in rural communities, and generally apart from the bureaucratic complexity and lack of coordination that are endemic in youth services.

Some of the programs that arose in response to the farm crisis of the 1980s incorporated at least some such features, although data about their effectiveness in increasing coping responses are unavailable. For example, Friedberger (1988) described several programs that were implemented in rural Iowa in the mid-1980s. A hotline established by the Cooperative Extension Service logged more than 15,500 calls between February 1985 and May 1986, two-thirds of them from adult males. Although the greatest manifest reason for calls was the need for help with financial matters (more than 90%), one-fourth of the callers also sought help with emotional problems, and about one-tenth discussed problems related to divorce, chronic illness, or alcoholism. The hotline provided a nonstigmatizing entry point for emotional support and advice at a time that they were especially needed. Using volunteers, such a service also offers possibilities for support to rural youth and their parents. The community development programs historically fundamental to Cooperative Extension Services, especially in regard to family life education and youth development, provide a good base for volunteer services more clearly focused on youth with significant problems or at risk of developing such problems.

Another program that attracted substantial use in Iowa was Farmers Helping Farmers, a program directed by a farmer/social worker that incorporated volunteers in building programs to empower demoralized farm families (see Friedberger, 1988). Youth self-help groups were a key element of Farmers Helping Farmers. As Wright and Rosenblatt (1987) have discussed, such programs can be particularly helpful when they sensitize the community to threats to its integrity by identifying circumstances in which social networks can break down (e.g., emotional distancing in response to stress) and provide concrete ways of responding to neighbors' stress (e.g., simple inquiry about how things are going when times are tough).

Some programs that predate the farm crisis incorporated such a combination of social support and skill building into services for rural youth and their families. For example, Hollister, Edgerton, & Hunter (1985) designed a comprehensive array of "alternative" services, most of them administered by indigenous paraprofessionals, in several rural communities in North Carolina. The services provided were extensive and relatively inexpensive: self-help groups for parents (e.g., a single parents group; a Parents Anonymous group for abusive parents), a library and discussions of audiovisual materials (e.g., videocassettes) on parenting skills and youth development; pamphlets on family life and youth problems (presented with the instruction to "find the five best ideas that will help you"); communications exercises for families; case management;

therapeutic camps; Big Buddy programs; Scouting; therapeutic recreation. Although such services typically are regarded as "supplementary" to professional services, they were shown to be at least as effective as traditional mental health services in dealing with family and youth problems.

Whether such low-cost programs are involved or more highly intensive programs are designed for those youth who have the most serious problems, new financing mechanisms are needed that are not reliant on unit-based, fee-for-service reimbursement, but that instead provide flexibility in eligible providers and the amount and site of client contact, promote integrated, multi-domain approaches (e.g., intensive home-based services), and emphasize prevention. Stability of funding also needs to be assured in the light of the instability and, in some regions, outright impoverishment of the tax base in many rural communities.

Attention should be given to altering the rules that govern Medicaid and other health and income programs that are biased against rural communities. In particular, supports are needed for the working poor families in rural communities, who often are ineligible for federally funded programs and who also often fall outside private health financing.

INSTITUTIONAL BASES FOR ADOLESCENT SERVICES

To accomplish the sorts of programs that are needed to promote the health of rural adolescents, an institutional base is needed. Programs should be located insofar as possible where adolescents spend their time to reduce the problems of stigma and inaccessibility that appear to be particularly formidable in many rural communities. It probably also is desirable to merge the various agencies serving rural adolescents or at least to locate their offices in common sites to increase the likelihood of an interdisciplinary, integrated approach to services and to use professional resources cost-effectively.[24] For example, individual agencies may not find hiring a particular kind of health professional (even one who has generic training in adolescent and family services) to be feasible in a rural community, but various agencies might combine partial positions to ensure that such a professional is available.

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[24] The approach that is being described here would be the rural and adolescent analogue to some Model Cities agencies which aimed to provide comprehensive, single-center services for underserved inner-city communities.

Conceptually, three existing forms of professional service centers appear well suited to be a foundation for development of a comprehensive adolescent health program, although systematic evaluations of their feasibility and efficacy as rural adolescent health agencies are lacking. First and perhaps most obvious are school-based clinics, particularly when the necessary legal structures are in place so that youth can have direct and confidential access to health services. School-based clinics have several apparent advantages as comprehensive rural adolescent health services. Schools are commonly the agency most likely to be at the community level. Therefore, they typically are relatively easily accessible even in areas where the population is highly dispersed, and of course adolescents usually are at schools five days a week during much of the year. In many rural communities, schools serve as de facto community centers where social as well as academic functions occur, and where there often is a tradition of organized community involvement with youth. Because schools are nearly universal institutions, school health clinics also are likely to be relatively unstigmatizing. Also, schools are well suited philosophically to skill-building, problem-solving, and preventive approaches to the behavioral causes of many adolescent health problems.

A second option for a comprehensive adolescent health agency is the community health center. The authorizing legislation for the community health centers program, 42 U.S.C. § 254c, provides not only for primary health services, including preventive services such as family planning, but also for "supplemental health services" for medically underserved populations. Given the combination of few health professionals and geographic inaccessibility, most rural communities would qualify as medically underserved under the statute.

The potential scope of services in a community health center is sufficient to incorporate traditional physical health services with the broad, socially and educationally oriented approach that, conceptually, is optimal to address the problems of rural youth most at risk. Among the supplemental health services that community health centers are authorized to provide are:

(E) mental health services;...

> (H) allied health services [not further defined];...
>
> (J) public health services (including, for the social and other nonmedical needs which affect health status, counseling, referral for assistance, and followup services);...
>
> (L) health education services (including nutrition education); and
>
> (M) services which promote and facilitate optimal use of primary [and supplemental] health services....[25]

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[25] 42 U.S.C. § 254c(b)(2).

Third, community mental health centers can serve as comprehensive centers for prevention and remediation of the behavioral aspects of adolescent health problems, although largely physical care, perhaps including family planning services, probably is outside their scope. Hollister, Edgerton, and Hunter's (1985) well evaluated program of broad, "alternative" services in community mental health centers in rural North Carolina is illustrative of the possibilities, although that program did not have a special emphasis on adolescents. Stimulation of community mental health centers to play such a role might require more specific mandates under the Alcohol, Mental Health, and Drug Abuse Block Grant program, analogous to the list of services that was mandated under the

Community Mental Health Centers Act and its amendments (such as those that were present under the Mental Health Systems Act) but tailored to meet the needs of rural adolescents.

Each of the three options described here not only could be used for a broad, community-based initiative on rural adolescent health, but each also has the advantage of a potentially family-oriented approach. Although such an approach requires little ingenuity to apply in community health or mental health centers, which already are obligated to take a lifespan approach, it is also potentially applicable in school-based clinics. Particularly in rural communities that are so small that schools are the agencies physically located there, schools can serve as family service centers open beyond conventional school hours and incorporating home-based services. A model for such a school-based, family-centered interdisciplinary approach incorporating home-based services already exists in early childhood special education.

DIRECTIONS FOR RESEARCH

A starting point for a research agenda on health of rural adolescents is simply more descriptive research, with designs adequate to separate "rural" from "regional" from "social-class" from "ethnic" factors. Epidemiological research on adolescent mental health is particularly sparse, but multivariate, cross-regional studies are almost nonexistent for all adolescent health problems. Without such research, it is difficult to plan public health initiatives responsive to the needs of rural youth in particular parts of the country. Although substantial knowledge is available about whether rural-urban differences exist at a gross level, refined analyses to determine the effects of particular dimensions of rural life, whether nationally or regionally, generally have not been conducted.

There also is a strong need for basic research on the process of social support (and lack of it) among rural youth of various ages and backgrounds and its significance in mediating various developmental processes. Longitudinal studies would be particularly useful in beginning to identify the antecedents of social isolation and the potency of various elements and sources of social support for rural youth and their families. Such research would be valuable in designing programs that build on the "natural" strengths of rural communities and that mitigate aspects of rural life that may result in ostracism rather than support.

More information also is needed on the rural health system itself, particularly as it relates to the provision of preventive and therapeutic services to rural youth. Little is known, for example, about the factors that affect the viability of rural hospitals and even whether the availability of local hospitals is an important element in rural adolescent health services. Still less is known about the efficacy of various financing systems for ensuring rural adolescents' access to health care and fostering comprehensive programs, integrated across service systems and domains of development and family life. Experimentation is needed not only in financing, but also in programs to prevent agricultural injuries, foster sense of personal control, and mobilize the community's sense of responsibility and involvement with its youth, including those who are at high risk. Such community development programs might use research findings on undermanning and natural helping behavior for conceptual bases.

Rural America long has been revered for its quality of life. Although such perceptions sometimes were based more on myth than reality, some aspects of rural ways of life--e.g., family strength and neighborliness--surely are consistent with national values and worthy of promotion. Insufficient attention has been given, though, to the means to sustain such aspects and thus support the healthy development of rural youth. We have lacked both scholarly study of the factors that stimulate such aspects and policy approaches that give adequate assistance to rural poor families. A sufficient knowledge base exists, though, to serve as a foundation for a program of research and new service initiatives to promote the health of rural adolescents.

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APPENDIX

MAJOR FEDERAL PROGRAMS DIRECTLY OR INDIRECTLY RELATED TO THE HEALTH OF RURAL ADOLESCENTS

This appendix provides an overview of federal programs aimed at or affecting rural adolescents. The types of programs reviewed include income programs, nutrition programs, social service programs, education and training programs, health programs, and tax programs. The programs described in this appendix include those for which adolescents ranging in age from 12 to about 17 are eligible. In some cases, benefits extend beyond the age of 17; however, those programs for which eligibility begins at age 18 are not described.

It should be recognized that most of the programs described in this appendix were not designed specifically for rural adolescents. To the contrary, as discussed in the text, financing generally is not easily available for the sorts of youth programs that are most likely to be effective in remediating the behavioral and social problems often associated with health problems among rural adolescents. Similarly, because of the presence of two parents in the home, at least one of whom is employed (Cordes, 1989), poor rural families typically are ineligible for income programs and other programs intended to alleviate poverty and the stressors associated with it. Indeed, although the list of programs in this appendix is lengthy, the more striking fact is simply how few federal programs directly address the health and other needs of rural youth.[26]

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[26] A number of recent Congressional initiatives have dealt with training of rural health professionals and reduction of rural-urban disparities in health care reimbursement policies (for a review and discussion, see DeLeon, Wakefield, Schultz, Williams, & VandenBos, in press). Although such initiatives do not have direct effects on adolescent programs, they may have the effect over the long term of increasing services to rural youth. Of particular note is the Behavioral Science-Based Interdisciplinary Health Professions Project, authorized in the Indian Health Care Amendments of 1988, Pub. L. 100-713, which has the potential of expanding both the human resource pool and the knowledge base for delivery of behaviorally-oriented rural health services by various non-physician professionals. Given the behavioral underpinnings of many adolescent health problems, the project could be used to fund one or more interdisciplinary centers for training and research related to rural adolescent health care.

INCOME PROGRAMS

Title IV-A of the Social Security Act authorizes Aid to Families with Dependent Children (AFDC) (U.S. Congress, Needs-based, 1986; U.S. Congress, 1987). AFDC is a cash grant program enabling states to provide assistance to children and adolescents living in impoverished single-parent households and some impoverished two-parent households. AFDC has an important role in the health care system, because eligibility for AFDC also entitles the recipient to Medicaid coverage and food stamps. Eligibility ends when the adolescent reaches age 18, although states may choose to pay benefits to high school students until age 19.

In order to be eligible for AFDC, an adolescent must lack financial support because at least one parent is dead, disabled, or continually absent from the home. The Family Support Act of 1988, Pub. L. 100-485, expanded AFDC eligibility to two-parent households already eligible for unemployment benefits. Although this expansion may have special consequences for rural poor families, who commonly are two-parent, it only begins to deal with the problem. The Family Support Act continues the lack of coverage of two-parent "working poor" families and those two-parent families where the principal wage earner has exhausted unemployment benefits or was never eligible for such benefits.

Each state determines the AFDC criterion for financial need and the maximum benefit level. Federal law imposes upper limits for eligibility by setting the federal poverty threshold level, and by setting an outer resource limit in equity value per family. The federal government provides funding for 50 to 78 percent of each state's AFDC benefit payments. The proportion paid by the federal government is inversely related to the state's per capita income. The states must match the remaining amount. Some states require the local government to provide a certain proportion of the funding (U.S. Congress, 1987).

Title IV-D of the Social Security Act (U.S. Congress, 1987) is designed to assist AFDC and non-AFDC families in locating absent parents, establishing paternity, and establishing and collecting child support payments. AFDC beneficiaries are required to assign their support rights to the state in order to receive benefits. The first $50 in monthly child support is returned to the family in addition to AFDC benefits. All money collected on behalf of non-AFDC families is paid to the family. The federal proportion of funding was 70 percent in 1987, 68 percent in 1988 and 1989, and will be 66 percent in 1990 and thereafter. Collections made for AFDC families are used to offset AFDC benefit costs and are shared proportionately by the federal and state governments according to the established matching formula.

Title XVI of the Social Security Act (U.S. Congress, Need-based, 1986; U.S. Congress, 1987; U.S. DHHS, 1988) authorizes Supplemental Security Income (SSI) to assure a minimum income to indigent aged, blind, or disabled persons. Adolescents under the age of 18 with who are blind or disabled, and whose family's income and resources fall within the established limits qualify for SSI benefits. Children under 18 are considered disabled if they have a physical or mental impairment comparable in severity to one that would keep an adult from working for at least 12 months. In most states, recipients are automatically eligible for Medicaid benefits. SSI incomes and resources are not counted in determining AFDC eligibility.

Title IV-A of the Social Security Act (U.S. Congress, Need-based, 1986; U.S. Congress, 1987) authorizes emergency assistance to needy children and adolescents under age 21 and their families, including migrant workers. The emergency assistance programs may provide cash, food, clothing, rent, utilities, or medical care. Assistance is limited to 30 days per year, and is in effect in 29 states and territories. The federal government pays 50 percent of the funding for each state.

The Federal Black Lung Benefits Act (Title IV of the Federal Coal Mine Health and Safety Act of 1969) (U.S. Congress, 1987) provides cash benefits and medical care costs to disabled coal miners with pneumoconiosis (black lung disease) and for their survivors in the case of death. Benefits are increased when the employee has one or more dependent children.

Title II of the Social Security Act (U.S. Congress, 1987) provides cash benefits to dependent children of retired, disabled, or deceased parents entitled to social security benefits. The amount of assistance is based on a percentage of the worker's basic benefit.

The Federal Unemployment Tax Act is another program that may indirectly affect rural adolescents (U.S. Congress, 1987). In 14 states, there are provisions for dependents of recently unemployed parents. General Assistance to Indians (authorized by the Snyder Act of 1921) provides cash assistance to needy Indians regardless of family structure or employment status of the parent or caretaker, and precludes eligibility for AFDC or SSI. Military benefits may reach rural adolescents through Civil Service Child Survivor Benefits (Title 5 U.S.C.), the Military Survivor Benefit Plan (Pub. L. 92-425), Veterans' Dependency and Indemnity Compensation (38 U.S.C. 410 et seq.), or Veterans' Nonservice-connected Death Pension (38 U.S.C. 532 et seq.). Federal workers who are unemployed because of work-related injuries, and survivors in cases of work-related death, are eligible for benefits under the Federal Employees' Compensation Act (FECA). Benefits are increased if the employee has one or more dependent children.

NUTRITION PROGRAMS

The Food Stamp Act (U.S. Congress, 1987) provides food purchasing power in the form of food stamps to low-income families. Assistance varies according to household size and income. Eligibility criteria are established at the federal level and are generally nationally uniform, with eligibility beginning at 130 percent of the federal poverty threshold level. Recipients of AFDC or SSI are automatically eligible for food stamps. All funding is provided by the federal government.

The National School Lunch Act (U.S. Congress, 1987) provides cash and commodities to schools serving daily nonprofit lunches. All participating students receive subsidized lunches. Students from families with incomes at 130 to 185 percent of the federal poverty level receive reduced-price lunches, and students from families with incomes below 130 percent of the federal poverty level receive free lunches. Public schools, and private schools not charging more than an average annual tuition of $2,000 are eligible to participate in the program. States are required to match at least 30 percent of the funding.

The Child Nutrition Act (U.S. Congress, 1987) authorizes assistance in providing subsidized breakfasts to students in participating schools. Criteria for reduced priced or free breakfast are comparable to the school lunch program criteria, as are eligibility requirements for schools. There are no state matching requirements for this program. The Child Nutrition Act also provides a special milk program for schools not participating in other federal child nutrition programs. Free milk is available for qualifying low-income students, and subsidized milk is available to all other students.

For low-income adolescents needing assistance during the summer months, the National School Lunch Act provides for a Summer Food Service Program (U.S. Congress, 1987). This program is available only in areas where 50 percent or more of students are from families with incomes at or below 185 percent of the federal poverty level. Eligibility is limited to schools, and municipal or county governments. Most programs provide up to two free meals per day for all participants. Programs serving migrant workers may provide up to four meals per day. There are no state matching fund requirements.

Low income pregnant adolescents and adolescent mothers whose children are receiving inadequate nutrition are eligible for the Special Supplemental Food Program for Women, Infants, and Children (WIC). This program provides food items and vouchers for purchase of specific food items. Eligibility is determine by the states, but may not go below 100 percent nor exceed 185 percent of the federal poverty threshold.

SOCIAL SERVICE PROGRAMS

Title XX of the Social Security Act (U.S. Congress, 1987) authorizes Social Service Block Grants (SSBG) to all states for a variety of social services. Services relevant to rural adolescents include protective services and home care services for the handicapped. The amount of funding is based on the state's population. There are no state matching fund requirements.

Title IV-E of the Social Security Act (U.S. Congress, Review, 1985; U.S. Congress, 1987) authorizes funding for AFDC-eligible children and adolescents in foster care. It provides funding for the cost of food, shelter, clothing, daily supervision, school supplies, personal items, liability insurance, and travel expenses for home visits. Eligibility for Medicaid is automatic and must be provided by the state in which the child is residing. The program provides incentives for programs designed to help keep families intact. Funds are provided for transition from foster care to independent living for adolescents who have reached age 16. Fundable services include daily living skills programs, vocational training, counseling, outreach programs, and programs that encourage the adolescent to finish high school. Payments under this program end when the adolescent reaches age 18, although some states fund high school students up to age 19. For foster care, state matching rates are determined by Medicaid matching rates, and average about 53 percent nationally. For independent living, funding is based on the AFDC foster care caseload.

Other programs (U.S. Congress, Needs-based, 1986; U.S. Congress, 1987) which may be relevant to rural adolescents include Adoption Assistance (Title IV-E of the Social Security Act), which is designed to provide cash assistance payments to parents who adopt SSI or AFDC eligible children with special needs. State matching rates are determined by Medicaid matching rates. The Adoption Opportunities Program (Title II of the Child Abuse Prevention and Treatment and Adoption Report Act) (U.S. Congress, 1987) provides funding for programs which encourage the adoption of handicapped children. There are no state matching fund requirements.

There are several federal programs providing grant money for programs addressing the prevention of child abuse and neglect (U.S. Congress, 1987). Child abuse grants (Child Abuse Prevention and Treatment Act) are provided to states based on each state's under-18 population, and are fully funded by the federal government. States must meet eligibility requirements, including establishing procedures for reporting and investigating abuse and neglect, and protective services. On a related basis, the Child Abuse Challenge Grant Program (Pub. L. 98-473) encourages states to establish funding mechanisms to support child abuse and neglect prevention programs. Family Violence Programs (Child Abuse Prevention and Treatment Act and Victims of Crime Act) authorize grant funding for the prevention and treatment of family violence, the National Clearinghouse on Family Violence, and compensation for services for victims of family violence. Three-year grants are provided, with the amount based on state population. States are required to match a proportion of the funding. The state share increases each year.

Title IV-B of the Social Security Act (U.S. Congress, 1987) authorizes funding for child welfare services, child welfare training, and child welfare research and demonstration projects. Fundable services include protective services; assistance to programs designed to prevent or remedy neglect, abuse, and exploitation of children; programs designed to prevent or remedy delinquency; programs designed to keep children in their homes; and foster care programs. Although data are not uniformly collected because of minimal reporting requirements, it appears that most funding is allocated for foster care services (U.S. Congress, 1987). Other fundable services include training and research grants for programs relevant to child welfare. Given the acute training needs that have been documented in rural youth services, this provision may provide the basis of university/state-agency partnerships that will enhance service delivery, potentially in creative ways. There is a 25 percent matching requirement for states, although in practice it appears that states spend more than the required proportion. Federal funds are disbursed based on the state's population under 21 and per capita income. The states have broad discretion in distributing the funds.

Programs targeting developmentally disabled children and adolescents qualify for funding under the Developmental Disabilities Assistance and Bill of Rights Act (U.S. Congress, 1987). Funding is based on state population, the relative need for developmental disabilities services, and relative state financial need. The state proportion is 25 percent, except in impoverished areas, where it is 10 percent. The Domestic Volunteer Service Act (U.S. Congress, 1987) provides grant funding to agencies with Foster Grandparent Programs. Low-income persons aged 60 and over are provided with volunteer opportunities to work part time with disabled children under 21. The federal share is 90 percent. Indian Child Welfare Assistance (Snyder Act of 1921) provides funds for foster and institutional care for dependent, neglected, and handicapped Indian children. The Indian Child Welfare Act provides grant funding to help Indian tribes intervene in child custody, foster care, and adoption matters (U.S. Congress, 1987). Each of these programs is 100 percent federally funded.

The Runaway and Homeless Youth Act (U.S. Congress, 1987) provides funding for residential care and counseling for adolescents under age 18. Grants are awarded directly to the residential facility, but are allocated based on the state's under-18 population. States have a 10 percent matching requirement. The Juvenile Justice and Delinquency Prevention Act (U.S. Congress, 1987), provides assistance to state and local governments, and to private nonprofit agencies to develop programs targeting juvenile delinquency. Funding is based on the state's under-18 population. Given the persistence of the problem of juveniles in adult jails in some rural communities, many of which lack alternative means of providing for youth awaiting a hearing, the JJDPA may assume increasing importance as a catalyst for service system development in rural areas.

EDUCATION AND TRAINING PROGRAMS

The Education Consolidation and Improvement Act (U.S. Congress, 1987) authorizes grant funding for school districts based on the relative number of children aged 5-17, the number of impoverished families, the number of neglected and delinquent children in residential care, the number of children in AFDC nonfarm families of four in excess of the poverty level. School districts with the relatively largest percentage of impoverished children, and educationally disadvantaged children within these school districts are targeted. There are no state matching requirements; however, state and local governments must allocate at least 90 percent of the amount allocated the previous year in order to qualify for a grant.

The Education of the Handicapped Act (EHA) (U.S. Congress, 1987) allocates funds, based on the number of handicapped children and adolescents, aged 3-21, to provide for their public education in the least restrictive setting. The program has a number of subcomponents targeting various groups within the population of handicapped children. States are responsible for a substantial share of the costs, and may not receive more than 40 percent of the national average per pupil expenditure (APPE) for each handicapped child. The EHA has never been fully funded. This gap has special consequences for rural areas, because a single student with severe low-incidence special educational needs can have a dramatic effect on the school budget.

Grant funding to improve educational services to bilingual students is available through the Bilingual Education Act (U.S. Congress, 1987). Programs targeting migrant children are eligible for funding under the Education consolidation and Improvement Act (U.S. Congress, 1987). Programs for refugees are eligible for grant funding under the Immigration and Nationality Act and Refugee Education Assistance Act (U.S. Congress, 1987). The Indian Education Act, the Johnson-O'Malley Act, and the Snyder Act all provide federal funding for Indian education programs. Impact aid (Pub. L. 81-874 and Pub. L. 8-815) is another source of federal funding for school districts near Indian reservations (U.S. Congress, 1987).

Vocational educational training programs for disadvantaged or handicapped adolescents and other age groups are funded through a variety of sources. The Carl D. Perkins Vocational Education Act, and the Job Training Partnership Act (Title IV-E for economically disadvantaged adolescents, Title IV-B for Job

Corps, and Title II-B for summer youth employment and training) all provide such funding.

HEALTH PROGRAMS

Title XIX of the Social Security Act (U.S. Congress, 1987) authorizes funding for Medicaid. Medical assistance is provided through this program for low-income persons who are aged, blind, disabled, or members of families with dependent children (referred to as "categorically needy"). Usually only single-parent AFDC households are eligible for Medicaid; however, states are given the option of covering low-income two-parent households or subcategories of otherwise ineligible children and adolescents (referred to as "Ribicoff" children), such as those in foster care, subsidized adoptions, or residential care facilities. Recipients of AFDC or SSI automatically become eligible for Medicaid. States may also elect to cover "medically needy" individuals whose incomes fall between the standards for cash assistance and the state standard.

Services relevant to rural adolescent health care which are covered under Medicaid include inpatient and outpatient hospital services, physician services, Early and Periodic Screening Diagnosis and Treatment (EPSDT), laboratory and x-ray services, family planning services, and rural health clinic services. EPSDT is designed for categorically needy children and adolescents and includes an outreach component. The federal share of Medicaid is inversely related to the per capita income of the state and ranges from 50 to 78 percent (U.S. Congress, 1987). Section 317(j)(1) of the Public Health Service Act (U.S. Congress, 1987) provides free immunization for the control of various infectious diseases.

Title X of the Public Health Service Act (U.S. Congress, Teenage, 1986; U.S. Congress, 1987) provides assistance for family planning clinics, clinic staff training, and development and dissemination of family planning information. Pregnant adolescents and adolescent parents are targeted by this program. Individuals living below the poverty level are eligible for free family planning services. Title V of the Social Security Act (U.S. Congress, 1987) provides block grant funding for health services to mothers and children with low incomes or limited access to health services. Women and children living below the poverty level are eligible for free health services under this program.

Title XX of the Public Health Service Act (U.S. Congress, 1987) funds demonstration projects targeting the prevention of adolescent pregnancy, and projects assisting pregnant adolescents and adolescent parents. Projects are required to give primary emphasis to youth under age 18. Demonstration projects receive 70 percent federal funding, with a gradual decrease thereafter, and research projects receive 100 percent federal funding.

Title XIX-B of the Public Health Service Act (U.S. Congress, 1987) authorizes block grant funding for alcohol, drug abuse, and mental health services. No matching state funding is required. Title XIX-A of the Public Health Service Act (U.S. Congress, 1987) authorizes block grant funding for preventive health and health services. No matching state funding is required.

Other health programs (U.S. Congress, 1987) include the Indian Health Program (Snyder Act of 1921), the Migrant Health Program (Section 329 of the Public Health Service Act), and funding for Community Health Centers (Section 330 of the Public Health Service Act). The Community Health Center program is designed to provide assistance to primary health care service centers in medically underserved areas. Only nonprofit centers are eligible for such funding. The potential significance of this program in rural communities is elaborated in the main text.

HOUSING PROGRAMS

The U.S. Housing Act (U.S. Congress, 1987) provides low-income public housing primarily for families with children, although single persons, elderly, and handicapped are also eligible. As noted in the main text, substandard housing is a serious problem in rural America. However, conventional public housing arrangements may be ill-suited to low-population-density areas.

Priority under the Housing Act is given to households with incomes below 50 percent of the local median, households occupying substandard housing, and those displaced due to government action. The federal government finances the housing projects, and the local government is required to waive property taxes. Section 8 of the U.S. Housing Act provides assistance to low-income households occupying private, moderate rent housing. Existing or new housing units may be utilized. Section 236 subsidizes mortgages of privately owned units rented by participants of rental assistance programs. Section 325 of the National Housing Act (U.S. Congress, 1987) provides assistance to low- and moderate-income families in becoming homeowners by reducing the interest rate, usually to 4 percent.

TAX PROGRAMS

Section 43 of the Internal Revenue Code (U.S. Congress, Needs-based, 1986; U.S. Congress, 1987) provides Earned Income Credit (EIC) to low-income working parents with dependents. In view of the large number of working poor and intermittently or underemployed parents in rural America, the EIC may serve as a way of ensuring that rural poor families have even less disposable income than most urban poor of similar income levels.

EIC is a refundable tax credit, that is, the person does not need to owe income tax to qualify for the credit. In order to qualify an individual or married couple must have earned income, and the income must be less that $10,000 (in 1986). EIC is considered earned income in determining eligibility for other federal benefits. The federal share of the program is 100 percent. Section 151 of the Internal Revenue Code (U.S. Congress, 1987) provides tax exemption for dependents. Section 21 of the Internal Revenue Code (U.S. Congress, 1987) provides further tax credits for physically or mentally incapacitated depend